



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

### Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

### About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

LEIDOX LIBRARY



Mykitch Collection.  
Presented in 1878.











THE  
GALLERY OF PORTRAITS:  
WITH  
MEMOIRS.

---

VOL. I.

## COMMITTEE.

**Chairman**—The Right Hon. the LORD CHANCELLOR.

**Vice-Chairman**—The Right Hon. LORD JOHN RUSSELL, M.P., Paymaster General.

**Treasurer**—WILLIAM TOOKE, Esq., M.P., F.R.S.

W. Allen, Esq., F.R. and R.A.S.  
Rt. Hon. Viscount Althorp, M.P., Chancellor of the Exchequer.  
Rt. Hon. Lord Auckland, President of the Board of Trade.  
W. B. Baring, Esq., M.P.  
Capt. F. Beaufort, R.N., F.R. and R.A.S., Hydrographer to the Admiralty.  
Sir C. Bell, F.R.S.L. and E.  
John Bostock, M.D., F.R.S.  
The Rt. Rev. the Bishop of Chichester.  
William Coulson, Esq.  
R. D. Craig, Esq.  
Wm. Crawford, Esq.  
J. Frederick Daniel, Esq., F.R.S.  
Rt. Hon. Lord Dover, F.R.S., F.S.A.  
Lieut. Drummond, R.E., F.R.A.S.  
Viscount Ebrington, M.P.  
T. F. Ellis, Esq., M.A., F.R.A.S.  
John Elliotson, M.D., F.R.S.  
Howard Elphinstone, Esq., M.A.  
Thomas Falconer, Esq.

I. L. Goldsmid, Esq., F.R. and R.A.S.  
B. Gompertz, Esq., F.R. and R.A.S.  
G. B. Greenough, Esq., F.R. and L.S.  
H. Hallam, Esq., F.R.S., M.A.  
M. D. Hill, Esq., M.P.  
Rowland Hill, Esq., F.R.A.S.  
Edwin Hill, Esq.  
Rt. Hon. Sir John C. Hobhouse, Bart., M.P., Secretary at War.  
David Jardine, Esq., M.A.  
The Rt. Hon. the Lord Chief Justice of England.  
Henry B. Ker, Esq.  
Th. Hewitt Key, Esq., M.A.  
George C. Lewis, Esq., M.A.  
Edward Lloyd, Esq., M.A.  
James Loch, Esq., M.P., F.G.S.  
George Long, Esq., M.A.  
J. W. Lubbock, Esq., F.R., B.A. and L.S.S.  
Zachary Macanlay, Esq.  
H. Malden, Esq., M.A.

Sir B. H. Malkin, M.A.  
A. T. Malkin, Esq., M.A.  
James Manning, Esq.  
J. Herman Merivale, Esq., F.A.S.  
James Mill, Esq.  
W. H. Ord, Esq., M.P.  
Rt. Hon. Sir H. Parnell, Bt. M.P.  
Rt. Hon. T. S. Rice, M.P., F.A.S., Secretary to the Treasury.  
Dr. Roget, Sec. R.S., F.R.A.S.  
Sir M. A. Shee, P.R.A., F.R.S.  
Rev. Richard Sheepshanks, M.A.  
J. Smith, Esq., M.P.  
Wm. Starch, Esq.  
Dr. A. T. Thomson, F.L.S.  
N. A. Vigors, Esq., M.P., F.R.S.  
John Ward, Esq.  
H. Waymouth, Esq.  
J. Whishaw, Esq., M.A., F.R.S.  
John Wrottesley, Esq., M.A. Sec. R.A.S.

## LOCAL COMMITTEES.

**Anglo-Saxons**—Rev. E. Williams.  
Rev. W. Johnson.  
Mr. Miller.  
**Ashterton**—J. F. Kingston, Esq.  
**Bilston**—Rev. W. Leigh.  
**Birmingham**—Rev. J. Corrie, F.R.S. *Chairman*.  
Paul Moon James, Esq., *Treasurer*.  
Jos. Parkes, Esq., } *Honorary Secs.*  
W. Redfern, Esq., }  
**Bosa**—Leonard Horner, Esq., F.R.S.L. & E.  
**Bristol**—J. N. Sanders, Esq., *Chairman*.  
J. Reynolds, Esq., *Treasurer*.  
J. B. Estlin, Esq., F.L.S., *Secretary*.  
**Bury St. Edmunds**—B. Bevan, Esq.  
**Cambridge**—Rev. James Bowstead, M.A.  
Rev. Prof. Henslow, M.A. F.L.S. & G.S.  
Rev. Leonard Jenyns, M.A., F.L.S.  
Rev. John Lodge, M.A.  
Rev. Geo. Peacock, M.A., F.R.S. & G.S.  
Rev. Prof. Sedgwick, M.A., F.R.S. and G.S.  
Professor Smyth, M.A.  
Rev. C. Thirlwall, M.A.  
B. W. Rothman, Esq., M.A., F.R.A.S. and G.S.  
Rev. George Waddington.  
**Canterbury**—Alexander B. Higgins, Esq.  
**Canterbury**—J. F. Davis, Esq., F.R.S.  
**Canterbury**—R. A. Poole, Esq.  
William Roberts, Esq.  
**Cheshire**—Hayes Lyon, Esq.  
Dr. Cumming.  
Dr. Jones.  
Henry Potts, Esq.  
Dr. Thacker.  
Rev. Mr. Thorp.  
—Wardell, Esq.  
—Wedge, Esq.  
**Chichester**—Dr. Forbes, F.R.S., Dr. Sanden, and C. C. Dandy, Esq.

**Coventry**—Arthur Gregory, Esq.  
**Donagh**—John Madocks, Esq.  
Thomas Evans, Esq.  
**Derby**—Joseph Strutt, Esq.  
**Devonport**—Lt. Col. J. Hamilton Smith, F.R. and L.S.  
John Coles, Esq.  
**Etruria**—Jos. Wedgwood, Esq.  
**Exeter**—Rev. J. P. Jones.  
J. Tyrrell, Esq.  
**Glasgow**—K. Finlay, Esq.  
D. Bannatyne, Esq.  
Rt. Grahame, Esq.  
Professor Mylne.  
Alexander McGregor, Esq.  
Charles Tennant, Esq.  
Mr. T. Atkinson, *Honorary Secretary*.  
**Glamorganshire**—Dr. Malkin, Cowbridge.  
Rev. B. R. Paul, Lantwit.  
W. Williams, Esq., Aberpergwm.  
**Holywell**—The Rev. J. Blackwall.  
**Kelghley, Yorkshire**—Rev. T. Dury, M.A.  
**Leamington**—Rev. J. Barlett.  
**Leamington Spa**—Dr. Loudon, M.D.  
**Leeds**—J. Marshall, Esq.  
Benjamin Gott, Esq.  
J. Marshall, Jun., Esq.  
**Leicester**—J. W. Woolgar, Esq.  
**Liverpool Local Association**—Dr. Trill, *Chairman*.  
J. Mulleneux, Esq., *Treasurer*.  
Rev. W. Shepherd.  
J. Ashton Yates, Esq.  
**Ludlow**—T. A. Knight, Esq., P.H.S.  
**Maldenhead**—R. Goulden, Esq., F.L.S.  
**Manchester Local Association**—G. W. Wood, Esq., M.P., *Chairman*.  
Benjamin Heywood, Esq., *Treasurer*.  
T. W. Winstanley, Esq., *Hon. Sec.*  
Sir G. Philips, Bart., M.P.

**Monmouth**—J. H. Moggridge, Esq.  
**Neath**—John Rowland, Esq.  
**Newcastle**—James Losh, Esq.  
Rev. W. Turner.  
**Newport**—Ab. Clarke, Esq.  
T. Cooke, Jun., Esq.  
R. G. Kirkpatrick, Esq.  
**Newport Pagnall**—J. Millar, Esq.  
**Newton, Montgomeryshire**—W. Pugh, Esq.  
**Norwich**—Rt. Hon. Lord Suffield.  
Richard Bacon, Esq.  
**Phymouth**—George Harvey, Esq., F.R.S.  
**Rippon**—Rev. H. P. Hamilton, M.A., F.R.S. and G.S.  
Rev. P. Ewart, M.A.  
**Rathes**—Rev. the Warden of.  
Humphreys Jones, Esq.  
**Sheffield**—J. H. Abraham, Esq.  
**Shrewsbury**—R. A. Slaney, Esq., M.P.  
**South Petherton**—John Nicholletts, Esq.  
**St. Asaph**—Rev. George Strong.  
**Stockport**—H. Marsland, Esq., *Treasurer*.  
Henry Coppock, Esq., *Secretary*.  
**Tewitock**—Rev. W. Evans.  
John Rundle, Esq.  
**Warwick**—Dr. Conolly.  
The Rev. William Field, (*Leamington*).  
**Waterford**—Sir John Newport, Bt., M.P.  
**Wolverhampton**—J. Pearson, Esq.  
**Worcester**—Dr. Corbett, M.D.  
C. H. Hastings, M.D.  
C. H. Hebb, Esq.  
**Wrexham**—Thomas Edgworth, Esq.  
J. E. Bowman, Esq., F.L.S., *Treasurer*.  
Major William Lloyd.  
**Yarmouth**—C. E. Rumbold, Esq., M.P.  
Dawson Turner, Esq.  
**York**—Rev. J. Kenrick, M.A.  
John Wood, Esq., M.P.

THOMAS COATES, *Secretary*, No. 59, Lincoln's Inn Fields.

UNDER THE SUPERINTENDENCE OF THE SOCIETY FOR THE DIFFUSION OF  
USEFUL KNOWLEDGE.

---

THE  
  
GALLERY OF PORTRAITS:

WITH  
  
MEMOIRS.

---

VOLUME I.

---

LONDON:  
  
CHARLES KNIGHT, PALL-MALL EAST.

---

1833. - 55

---

PRICE ONE GUINEA, BOUND IN CLOTH.

1833

In A.L.A. 1833.

26



ROY W. B.  
CLUB  
YASSEL

## PORTRAITS AND BIOGRAPHIES

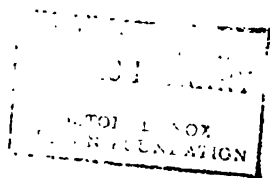
CONTAINED IN THIS VOLUME.

---

	Page.
1. DANTE . . . . .	1
2. Sir H. Davy . . . . .	11
3. Kosciusko . . . . .	21
4. Flaxman . . . . .	27
5. Copernicus . . . . .	34
6. Milton . . . . .	43
7. Jas. Watt . . . . .	55
8. Turenne . . . . .	63
9. Hon. R. Boyle . . . . .	72
10. Sir I. Newton . . . . .	79
11. Michael Angelo . . . . .	89
12. Moliere . . . . .	97
13. C. J. Fox . . . . .	103
14. Bossuet . . . . .	113
15. Lorenzo de Medici . . . . .	122
16. Geo. Buchanan . . . . .	129
17. Fénelon . . . . .	137
18. Sir C. Wren . . . . .	144
19. Corneille . . . . .	153
20. Halley . . . . .	161
21. Sully . . . . .	169
22. N. Poussin . . . . .	177
23. Harvey . . . . .	185
24. Sir J. Banks . . . . .	193

**LONDON:**  
**PRINTED BY W. CLOWES,**  
**Stamford Street.**







*Engraved by J.E. Baschard*

DANTE ALIGHIERI

*From a Bust by Raffaele Bonghi  
after a Bust by Spinelli*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge.

*London: Published by Charles Knight, 25 St. Paul's Church-Yard.*





## GALLERY OF PORTRAITS.

---



WHILE the more northern nations of modern Europe began to cultivate a national and peculiar literature in their vernacular tongues, instead of using Latin as the only vehicle of written thought, it was some time before the popular language of Italy received that attention which might have been expected from the prevalence of free institutions, and the constant intercourse between neighbouring states speaking in similar dialects. At last the example of other countries prevailed, and a native poetry sprung up in Italy. If it be allowable to compare the progress of the national mind to the stages of life, the Italian Muse may be said to have been born in Sicily with Ciullo d'Alcamo in 1190; to have reached childhood in Lombardy with Guido Guinicelli, about 1220; and to have attained youth in Tuscany with Guido Cavalcanti, about 1280. But she suddenly started into perfect maturity when Dante appeared, surpassing all his predecessors in lyrical composition, and astounding the world with that mighty monument of Christian poetry, which after five centuries of progressive civilization still stands sublime as one of the most magnificent productions of genius.

Dante Alighieri, the true founder of Italian literature, was born at Florence A.D. 1265, of a family of some note. The name of Dante, by which he is generally known, often mistaken for that of his family, is a mere contraction of his Christian name *Durante*. Yet an infant when his father died, that heavy loss was lightened by the judicious solicitude with which his mother superintended his education. She entrusted him to the care of Brunetto Latini, a man of great repute as a poet as well as a philosopher; and he soon made so rapid a progress, both in science and literature, as might justify the most sanguine hopes of his future eminence.

Early as he developed the extraordinary powers of his understanding, he was not less precocious in evincing that susceptibility to deep and tender impressions, to which he afterwards owed his sublimest inspirations. But his passion was of a very mysterious character. It arose in his boyhood, for a girl "still in her infancy," and it never ceased, or lost its intensity, though she died in the flower of her age, and he survived her more than thirty years. Whether he was enamoured of a human being, or of a creature of his own imagination,—one of those phantoms of heavenly beauty and virtue so common to the dreams and reveries of youth,—it is extremely difficult to ascertain. Some of his biographers are of opinion that the lady whom he has celebrated in his works under the name of *Bice*, or *Beatrice*, was the daughter of *Folco Portinari*, a noble Florentine; while others contend that she is merely a personification of wisdom or moral philosophy. But Dante's own account of his love is given in terms often so enigmatical and apparently contradictory, that it is almost impossible to make them agree perfectly with either of these suppositions.

Whatever its object, his affection seems to have been most chaste and spiritual in its nature. Instead of alienating him from literary pursuits, it increased his thirst after knowledge, and ennobled and purified his feelings. With the aid of this powerful incentive, he soon distinguished himself above the youth of his native city, not only by his acquirements, but also by elegance of manners, and amenity of temper. Thus occupied by his studies, refined and exalted by his love, and cherished by his countrymen, the morning of his life was sunned by the unclouded smiles of fortune, as if to render darker by the contrast the long and gloomy evening which awaited him.

His pilgrimage on earth was cast in one of the most stormy periods recorded in history. The Church and the Empire had been long engaged in a scandalous contest, and had often involved a great part of Europe in their quarrels. Italy was especially distracted by

two contending parties, the Guelfs, who adhered to the Pope, and the Ghibelines, who espoused the cause of the Emperor. In the year 1266, after a long alternation of ruinous reverses and ferocious triumphs, the Guelfs of Florence drove the Ghibelines out of their city, and at last permanently established themselves in power. The family of Dante belonged to the victorious party; and while he remained in Florence, it would have been dangerous, perhaps impossible, to avoid mingling in these civil broils. He accordingly went out against the Ghibelines of Arezzo in 1289; and in the following year against those of Pisa. In the former campaign he took part in the battle of Campaldino, in which, after a long and doubtful conflict, the Aretines were completely defeated. On that memorable day he fought valiantly in the front line of the Guelf cavalry, manifesting the same energy in warfare, which he had displayed in his studies and in his love.

But soon after the tumults of the camp had interfered with the calm of his private and meditative life, his adored Beatrice, whether an earthly mistress, or an abstraction of his moral and literary studies, was torn from him. This loss, which in his writings he never ceases to lament, reduced him to extreme despondency. Nevertheless in 1291, but a few months after it, he married a lady of the noble family of the Donati, by whom he had a numerous offspring; a circumstance which would indicate a strange inconsistency of character, had his heart been really preoccupied by another love. This connection with one of the first families of the republic may have smoothed his way to civic eminence; but if Boccaccio, usually a slanderer of the fair sex, be credited, the lady's temper proved unfavourable to domestic comfort.

He now entirely devoted himself to the business of government, and attained such reputation as a statesman, that hardly any transaction of importance took place without his advice. It has even been asserted that he was employed in no less than fourteen embassies to foreign courts. There may be some exaggeration in this statement; but it is certain that in 1300, at the early age of five and thirty, he was elected one of the Priors, or chief magistrates of the republic; a mark of popular favour which ended in his total ruin.

About this time, the Guelfs of Florence split into two new divisions called Bianchi and Neri (whites and blacks), from the denominations of two factions which had originated at Pistoja, in consequence of a dispute between two branches of the Cancellieri family. The Bianchi were chiefly citizens recently risen to importance, who, having received no personal injury from the Ghibelines, were disposed

to treat them with moderation; while the Neri consisted almost entirely of ancient nobles, who, having formerly been the leaders of the Guelfs, still retained a furious animosity against the Ghibelines. All endeavours to bring them to a reconciliation proved useless: they soon passed from rancour to contumely, and from contumely to open violence. The city was now in the utmost confusion, and was very near being turned into a scene of war and carnage, when the Priors, hardly knowing what course to pursue, invoked the advice of Dante. His situation was most perplexing and critical. The relations of his wife were at the head of the Neri; while Guido Cavalcante, his dearest friend on earth, was one of the foremost leaders of the Bianchi. Nevertheless, silencing all the claims of private affection for the good of his country, he proposed to banish the principal agitators of both parties. By the adoption of this measure, public tranquillity was for a time restored. But Pope Boniface VIII. could not suffer independent citizens to govern the republic. He sent Charles de Valois to Florence under colour of pacifying the contending parties, but in truth to re-establish in power the men most blindly devoted to his own interests. The French prince, after having made the most solemn promises to the Florentine government, that he would act with rigorous impartiality and adopt only conciliatory measures, obtained admission into the city, at the beginning of November, 1301. Making no account of the engagements he had entered into, he now permitted the Neri to perpetrate the most atrocious outrages on the families of their opponents, and to close this scene of horror by pronouncing sentence of exile and confiscation upon six hundred of the most illustrious citizens. Dante was among the victims. He had made himself obnoxious, both to the Neri, whom he had caused to be banished, and to Charles de Valois, whose intrusion in the internal affairs of the commonwealth he had firmly opposed in council. Accordingly, his house was pillaged and razed, his property confiscated, and his life saved only by his absence at Rome, whither he had been sent for the purpose of propitiating the Pope. Highly disgusted at the treacherous conduct of Boniface, who had been deluding him all the while with vain hopes and honeyed words, he suddenly left Rome, and hastened to Siena. On his arrival he heard that he had been charged with embezzling the public money, and condemned to be burned, if he should fall into the hands of his enemies. His indignation now reached its height; and in despair of ever being restored to his native city except by arms, he repaired to Arezzo, and united his exertions to those of the other Bianchi, who, making common cause with the Ghibelines,



formed themselves into an army with the object of entering Florence by force. But their hopes were disappointed; and after four years of abortive attempts they dispersed, each in pursuit of his own fortune.

The noble, opulent citizen, the statesman and minister, the profound philosopher, accustomed in all and each of these characters to the respectful homage of his countrymen, was now, to use his own words, "driven about by the cold wind that springs out of sad poverty," and compelled "to taste how bitter is another's bread, how hard it is to mount and to descend another's stairs." But the change from affluence to want was not the worst evil that awaited the high-minded patriot in banishment. For this he found compensation in the consciousness of having done his duty to his country. But he suffered much more from being mixed, and sometimes even confounded, with other exiles, whose perverse actions tended to disgrace the cause for which he had sacrificed all his private affections and interests. His misery was carried to the utmost by a continual struggle between his nice sense of honour and the pressure of want; by an excessive fear that his intentions might be misunderstood, and a constant readiness to mistake those of others. This morbid feeling he has pathetically expressed in several passages, which can scarce be read without profound emotion.

In this mental torture he wandered throughout Italy, from town to town, and from the palace of one of his benefactors to that of another, without ever finding a resting place for his wounded spirit. He stooped in vain to address letters of supplication to the Florentines; the rancour of his enemies was not to be softened by prayers. Meanwhile the hopes of the Ghibelines were again raised, when Henry VII., who had been elected Emperor in 1308, entered Italy to regain the rights of sovereignty which his predecessors had lost. Elated by the better prospects which appeared to open, Dante became a strenuous advocate of the imperial cause. He composed a treatise on monarchy, in which he asserted the rights of the empire against the encroachments of the Court of Rome: he wrote a circular both to the Kings and Princes of Italy, and to the Senators of Rome, admonishing them to give an honourable reception to their Sovereign; and he sent a hortatory epistle to the Emperor himself, urging him to turn his arms against Florence, and to visit that refractory city with severe punishment. Henry did accordingly lay siege to Florence in September, 1312, but without success; and the hopes of the Ghibelines were finally extinguished in the following August, by his death, under strong suspicion of poison. Thus Dante, in consequence of his recent conduct, saw himself farther than ever from restoration to his beloved Florence. The unfor-

fortunate exile, now reduced to despair, resumed his wanderings, often returning to Verona, where the Scaligeri family always received him at their court with peculiar kindness. It has been asserted that his thirst for knowledge led him to Paris and Oxford. His journey to England is still involved in doubt; but it appears certain, that he visited Paris, where he is said to have acquired great fame, by holding public disputations on several questions of theology.

On his return to Italy, he at length found a permanent refuge at Ravenna, at the court of Guido da Polenta, the father of that ill-fated Francesca da Rimini, for whom the celebrated episode of Dante has engaged the sympathy of succeeding ages. The reception which he experienced from this Prince, who was a patron of learning and a poet, was marked by the reverence due to his character, no less than by the kindness excited by his misfortunes. In order to employ his diplomatic talents, and give him the pleasing consciousness of being useful to his host, Guido sent him as ambassador, to negotiate a peace with Venice. Dante, happy at having an opportunity of evincing his gratitude to his benefactor, proceeded on his mission with sanguine expectation of success. But being unable to obtain a public audience from the Venetians, he returned to Ravenna, so overwhelmed with fatigue and mortification, that he died shortly afterwards, in the fifty-seventh year of his age, A.D. 1321, receiving splendid obsequies from his disconsolate patron, who himself assumed the office of pronouncing a funeral oration on the dead body.

The portrait of Dante has been handed down to posterity, both by history and the arts. He is represented as a man of middle stature, with a pensive and melancholy expression of countenance. His face was long, his nose aquiline, his eyes rather prominent, but full of fire, his cheek bones large, and his under lip projecting beyond the upper one; his complexion was dark, his hair and beard thick and curled. These features were so marked, that all his likenesses, whether on medals, or marble, or canvas, bear a striking resemblance to each other. Boccaccio describes him as grave and sedate in his manners, courteous and civil in his address, and extremely temperate in his way of living; whilst Villani asserts, that he was harsh, reserved, and disdainful in his deportment. But the latter writer must have painted Dante such as he was in his exile, when the bitter cup of sorrow had changed the gravity of his temper into austerity. He spoke seldom, but displayed a remarkable subtleness in his answers. The consciousness of worth had inspired him with a noble pride which spurned vice in all its aspects, and disdained condescending to anything like

flattery or dissimulation. Earnest in study, and attached to solitude, he was at times liable to fits of absence. The testimony of his contemporaries, and the still better evidence of his own works, prove that his hours of seclusion were heedfully employed. He was intimately conversant with several languages; extensively read in classical literature, and deeply versed in the staple learning of the age, scholastic theology, and the Aristotelian philosophy. He had acquired a considerable knowledge of geography, astronomy, and mathematics; had made himself thoroughly acquainted with mythology and history, both sacred and profane; nor had he neglected to adorn his mind with the more elegant accomplishments of the fine arts.

The mass of Dante's writings, considering the unfavourable circumstances under which he laboured, is almost as wonderful as the extent of his attainments. The treatise '*De Monarchia*,' which he composed on the arrival of Henry VII. in Italy, is one of the most ingenious productions that ever appeared, in refutation of the temporal pretensions of the Court of Rome. It was hailed with triumphant joy by the Ghibelines, and loaded with vituperation by the Guelfs. The succeeding emperor, Lewis of Bavaria, laid great stress on its arguments as supporting his claims against John XXII.; and on that account, the Pope had it burnt publicly by the Cardinal du Pujet, his legate in Lombardy, who would even have disinterred and burnt Dante's body, and scattered his ashes to the wind, if some influential citizens had not interposed. Another Latin work, '*De Vulgari Eloquentia*,' treats of the origin, history, and use of the genuine Italian tongue. It is full of interesting and curious research, and is still classed among the most judicious and philosophical works that Italy possesses on the subject. He meant to have comprised it in four books, but unfortunately only lived to complete two.

Of his Italian productions, the earliest was, perhaps, the '*Vita Nuova*,' a mixture of mysterious poetry and prose, in which he gives a detailed account of his love for Beatrice. It is pervaded by a spirit of soft melancholy extremely touching; and it contains several passages having all the distinctness and individuality of truth; but, on the other hand, it is interspersed with visions and dreams, and metaphysical conceits, from which it receives all the appearance of an allegorical invention. He also composed about thirty sonnets, and nearly as many '*Canzoni*,' or songs, both on love and morality. The sonnets, though not destitute of grace and ingenuity, are not distinguished by any particular excellence. The songs display a vigour of style, a sublimity of thought, a depth of feeling, and a richness of imagery not

known before: they betoken the poet and the philosopher. On fourteen of these, he attempted in his old age to write a minute commentary, to which he gave the title of 'Convito,' or Banquet, as being intended "to administer the food of wisdom to the ignorant;" but he could only extend it to three. Thus he produced the first specimen of severe Italian prose: and if he indulged rather too much in fanciful allegories and scholastic subtleties, these blemishes are amply counterbalanced by a store of erudition, an elevation of sentiment, and a matchless eloquence, which it is difficult not to admire.

These works, omitting several others of inferior value, would have been more than sufficient to place Dante above all his contemporaries; yet, they stand at an immeasurable distance from the '*Divina Commedia*,' the great poem by which he has recommended his name to the veneration of the remotest posterity. The Divine Comedy is the narrative of a mysterious journey through hell, purgatory, and paradise, which he supposes himself to have performed in the year 1300, during the passion week, having Virgil as his guide through the two regions of woe, and Beatrice through that of happiness. No creation of the human mind ever excelled this mighty vision in originality and vastness of design; nor did any one ever choose a more appropriate subject for the expression of all his thoughts and feelings. The mechanical construction of his spiritual world allowed him room for developing his geographical and astronomical knowledge: the punishments and rewards allotted to the characters introduced, gave him an excellent opportunity for a display of his theological and philosophical learning: the continual succession of innumerable spirits of different ages, nations, and conditions, enabled him to expatiate in the fields of ancient and modern history, and to expose thoroughly the degradation of Italian society in his own times; while the whole afforded him ample scope for a full exertion of his poetical endowments, and for the illustration of the moral lesson, which, whatever his real meaning may have been, is ostensibly the object of his poem. Neither were his powers of execution inferior to those of conception. Rising from the deepest abyss of torture and despair, through every degree of suffering and hope, up to the sublimest beatitude, he imparts the most vivid and intense dramatic interest to a wonderful variety of scenes which he brings before the reader. Awful, vehement, and terrific in hell, in proportion as he advances through purgatory and paradise, he contrives to modify his style in such a manner as to become more pleasing in his images, more easy in his expressions, more delicate in his sentiments, and more regular in his versification.

His characters live and move ; the objects which he depicts are clear and palpable ; his similies are generally new and just ; his reflections evince throughout the highest tone of morality ; his energetic language makes a deep and vigorous impression both on the reason and the imagination ; and the graphic force with which, by a few bold strokes, he throws before the eye of his reader a perfect and living picture, is wholly unequalled.

It is true, however, that his constant solicitude for conciseness and effect led him, sometimes, into a harsh and barbarous phraseology, and into the most unrestrained innovations ; but considering the rudeness of his age, and the unformed state of his language, he seems hardly open to the censure of a candid critic on this account. On the other hand, it is impossible not to wonder how, in spite of such obstacles, he could so happily express all the wild conceptions of his fancy, the most abstract theories of philosophy, and the most profound mysteries of religion. The occasional obscurity and coldness of the *Divine Comedy* proceeds much less from defects of style, than from didactic disquisitions and historical allusions which become every day less intelligible and less interesting. To be understood and appreciated as a whole, and in its parts, it requires a store of antiquated knowledge which is now of little use. Even at the period of its publication, when its geography and astronomy were not yet exploded, its philosophy and theology still current, and many of its incidents and personages still fresh in the memory of thousands, it was considered rather as a treasure of moral wisdom, than as a book of amusement. The city of Florence, and several other towns of Italy, soon established professorships for the express purpose of explaining it to the public. Two sons of Dante wrote commentaries for its illustration : Boccaccio, Benvenuto da Imola, and many others followed the example in rapid succession ; and even a few years since Foscolo and Rossetti excited fresh curiosity and interest by the novelty of their views. Notwithstanding the learning and ingenuity of all its expositors, the hidden meaning of the '*Divina Commedia*' is not yet perfectly made out, though Rossetti, in his '*Spirito Antipapale*,' lately published, seems to have shown, that under the exterior of moral precepts, it contains a most bitter satire against the court of Rome. But whether time shall remove these obscurities, or thicken the mist which hangs around this extraordinary production, it will be ever memorable as the mighty work which gave being and form to the beautiful language of Italy, impressed a new character on the poetry of modern Europe, and inspired the genius of Michael Angelo and of Milton.

There is no life of Dante which can be recommended as decidedly superior to the rest. The earliest is that of Boccaccio; but it evidently cannot be relied on for the facts of his life. There are others by Lionardo, Aretino, Fabroni, Pelli, Tiraboschi, &c. The English reader will find a fuller account prefixed to Mr. Carey's translation of the 'Divina Commedia,' and in Mr. Stebbing's *Lives of the Italian Poets*.



THE NEW YORK  
PUBLIC LIBRARY  
ASTOR LENOX  
TILDEN FOUNDATION



*Engraved by E. Sartorius.*

SIR HUMPHREY DAVY.

*From the original Picture by  
Sir Thomas Lawrence.  
in the possession of the Royal Society.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge.

*London: Printed by J. G. Knight, Pall Mall East.*









**WHERE** the length of the memoir necessarily bears a small proportion to the quantity of matter which presses on the biographer's attention, two courses lie open to his choice; either to select a few remarkable passages in his subject's life for full discussion, or to give a general and popular sketch of his personal history. The latter plan seems here the more advisable. To many readers a minute analysis of Davy's physical researches would be unintelligible, without full explanations of the very instruments and objects with, and upon which, he worked. We shall therefore make it our chief object to trace his private history, interspersing notices of his labours and discoveries, but leaving to publications of expressly scientific character the task of doing justice to his scientific fame. Both departments have been fully treated in the *Life* published by Dr. Paris.

Humphry Davy was born near Penzance in Cornwall, December 17, 1778, of a family in independent, though humble circumstances, which for a century and a half had possessed and resided upon a small estate situated in Mount's Bay. Though no prodigy of precocious intellect, his childhood gave reasonable promise of future talent; and especially manifested the dawning of a vivid imagination, united with a strong turn for experiments in natural philosophy. One of his favourite amusements was to exhibit to his playfellows the operation of melting in a candle scraps of tin; or to make and explode detonating balls. Another was the inventing and repeating to them fairy tales and romances. At times, however, he would exercise his eloquence upon graver subjects; and, when no better could be obtained, the future lecturer is said to have found a staid, if not attentive, audience in a circle of chairs. At an early age he was placed at school at Penzance, where, in the usual acceptation of the words, he

profited little: his own opinion, however, was different. "I consider it fortunate," he wrote to a member of his family, "that I was left much to myself as a child, and put upon no particular plan of study, and that I enjoyed much idleness at Mr. Coryton's school. I perhaps owe to these circumstances the little talents that I have, and their peculiar application: what I am, I have made myself. I say this without vanity, and in pure simplicity of heart." He was soon removed to the school at Truro, where he remained two years, undistinguished except by a love of poetry, which manifested itself in composition at an early age. This, indeed, continued to be a favourite amusement, until, in mature life, he became absorbed in scientific pursuits: and it has been said upon high authority, that if Davy had not been the first chemist, he would have been the first poet of his age. This opinion must look for support, not to his metrical productions, which in truth nowise justify it, but to the vivid imagination and high powers of eloquence, which, in the vigour and freshness of youth, delighted the fashionable, as much as his discoveries amazed the scientific world.

In 1794 his father died, and his mother in consequence removed from Varfell, the patrimonial estate, to Penzance, where Davy was apprenticed to Mr. Borlase, a surgeon in that town. For the medical part of his new profession he showed distaste; but his attention was at once turned to the study of chemistry, which he pursued thenceforward with undeviating zeal. Akin to this pursuit, and fostered by the natural features of his native county, was his early taste for geology. "How often," said Davy to his friend and biographer on being shown a drawing of Botallack mine,—“how often when a boy have I wandered about these rocks in search of new minerals, and when fatigued, sat down upon the turf, and exercised my fancy in anticipations of scientific renown.” The notoriety which, in a small town, he readily acquired as the boy who was “so fond of chemical experiments,” introduced him to a valuable friend, Mr. Davies Gilbert, in early life his patron, in mature age his successor in the chair of the Royal Society. By him the young man was introduced to Dr. Beddoes, who was at that time seeking an assistant in conducting the Pneumatic Institution, then newly established at Bristol, for the purpose of investigating the properties of aeriform fluids, and the possibility of using them as medical agents. It was not intended that, in forming this engagement, Davy should give up the line of life marked out for him; on the contrary, his abode at Bristol was considered part of his professional education. But his genius led him another way; and this lucky engagement opened a career of usefulness and fame,

which under other circumstances might have been long delayed. The arrangement was concluded upon liberal terms, and in October, 1798, before he was twenty years old, he left his home in high spirits to enter upon independent life. It is to his honour, that as soon as a competent, though temporary provision was thus secured, he resigned, in favour of his mother and sisters, all his claims upon the paternal estate.

Soon after removing to Bristol, he published, in a work entitled 'Contributions to Medical and Physical Knowledge,' edited by Dr. Beddoes, some essays on heat, light, and respiration. Of these it will be sufficient to say, that with much promise of future excellence, they show a most unbridled imagination, and contain many speculations so unfounded and absurd, that in after-life he bitterly regretted their publication. During his engagement, his zeal and intrepidity were signally displayed in attempts to breathe different gases, supposed, or known, to be highly destructive to life, with a view to ascertain the nature of their effects. Two of these experiments, the inhaling of nitrous gas and carburetted hydrogen are remarkable, because in each he narrowly escaped death. But his attention was especially turned to the gas called nitrous oxide, which, upon respiration, appeared to transport the breather into a new and highly pleasurable state of feeling, to rouse the imagination, and give new vigour to the most sublime emotions of the soul. The effects produced, exaggerated by the enthusiasm of the patients, were in fact closely analogous to intoxication; and many persons still remember the curiosity and amusement, excited by the freaks of poets and grave philosophers, while under the operation of this novel stimulus. In 1800 he published 'Researches Chemical and Philosophical, respecting Nitrous Oxide and its Respiration.' The novelty of the results announced, combined with the ability shown in their investigation, and the youth of the author, produced a great sensation in philosophical circles; and through the celebrity thus acquired, and the favourable opinion of him formed upon personal acquaintance by several eminent philosophers of the day, he was offered by the conductors of the Royal Institution, the office of Assistant Lecturer in Chemistry, with the understanding that ere long he should be made sole Professor. This negotiation took place in the spring of 1801, and on May 31, 1802, he was raised to the higher appointment.

To Davy, the quitting Bristol for London was the epoch of a transformation—an elevation from the chrysalis to the butterfly state. In youth his person, voice, and address were alike uncouth; and at first sight they produced so unfavourable an impression upon Count Rum-

ford, that he expressed much regret at having sanctioned so unpromising an engagement. The veteran philosopher soon found reason to change his opinion. Davy's first course of lectures, which was not delivered till the spring of 1802, excited a sensation unequalled before or since. Not only the philosophical but the literary and fashionable world crowded to hear him; and his vivid imagination, fired by enthusiastic love for the science which he professed, gave, to one of the most abstruse of studies, a charm confessed by persons the least likely to feel its influence. The strongest possible testimony to his richness of illustration is supplied by Mr. Coleridge:—"I go," he said, "to Davy's lectures to increase my stock of metaphors." Had this been all, the young prodigy would soon have ceased to dazzle; but his fame was maintained and increased by the success which waited on his undertakings; and, in a word, Davy became the lion of the day. The effect of this sudden change was by no means good. Sought and caressed by the highest circles of the metropolis, he endeavoured to assume the deportment of a man of fashion; but the strange dress sat awkwardly, and ill replaced a natural candour and warmth of feeling, which had singularly won upon the acquaintance of his early life. It is but justice, however, to add that his regard for his family and early friends was not cooled by this alteration in his society and prospects.

Our limits are too narrow to admit even a sketch of the various trains of original investigation pursued by Davy, during his connection with the Institution. Of these, the most important is that series of electrical inquiries pursued from 1800 to 1806, the results of which were developed in his celebrated first Bakerian Lecture, delivered in the autumn of the latter year, before the Royal Society, which received from the French Institute the prize of 3000 francs, established by the First Consul, for the best experiment in electricity or galvanism. In it he investigated the nature of electric action, and disclosed a new class of phenomena illustrative of the power of the Voltaic battery in decomposing bodies; which, in the following year, led to the most striking of his discoveries, the resolution of the fixed alkalies, potash and soda, into metallic bases. This discovery took place in October, 1807, and was published in his second Bakerian Lecture, delivered in the following November. The novelty and brilliancy of the view thus opened, raised public curiosity to the highest pitch; the laboratory of the Institution was crowded with visitors, and the high excitement thus produced, acting upon a frame exhausted by fatigue, produced a violent fever, in which for many days, he lay between life and death. Not until the following March was he able to resume his duties as a lecturer.

During the next four years he was chiefly employed in endeavouring to decompose other bodies, in prosecuting his inquiries into the nature of the alkalies and in obtaining similar metallic bases from the earths, in which he partially succeeded. The resolution of nitrogen was attempted without success. In tracing the nature of muriatic and oxy-muriatic acid, he was more fortunate; and proved the latter to be an undecomposed substance, in direct opposition to his own opinion, recorded at an earlier period. This discovery is the more honourable, for nothing renders the admission of truth so difficult, as having advocated error.

On the 8th April, 1812, he received the honour of knighthood from the Prince Regent, in testimony of his scientific merits. This was the more welcome, because he was on the eve of exchanging a life of professional labour for one, not of idleness, for he pursued his course of discovery with unabated zeal, but of affluence and independence. On the 11th of the same month, he married Mrs. Apreece, a lady possessed of ample fortune; previous to which he delivered his farewell lecture to the Royal Institution. At the same time he appears to have resigned the office of Secretary to the Royal Society, to which he had been appointed in 1807. Two months afterwards he published 'Elements of Chemical Philosophy,' which he dedicated to Lady Davy, "as a pledge that he should continue to pursue science with unabated ardour." In March, 1813, appeared the 'Elements of Agricultural Chemistry,' containing the substance of a course of lectures delivered for ten successive seasons before the Board of Agriculture.

That part of the Continent which was under French influence, being strictly closed against the English at this time, it is much to the credit of Napoleon, that he immediately assented to a wish expressed by Davy, and seconded by the Imperial Institute, that he might be allowed to visit the extinct volcanoes in Auvergne, and thence proceed to make observations on Vesuvius while in a state of action. He reached Paris, Oct. 27th, 1813. The French philosophers received him with enthusiasm: it is to be regretted that at the time of his departure their feelings were much less cordial. There was a coldness, and pride, or what seemed pride, in his manner, which disgusted a body of men too justly sensible of their own merit to brook slights; especially when, in spite of national jealousy, they had done most cordial and unhesitating justice to the transcendent achievements of the British philosopher. Nor was this the only ground for dissatisfaction. Iodine had been recently discovered in Paris, but its nature was still unknown. Davy obtained a portion, and proceeded to experiment upon it. This was thought by many an unfair interference with the fame

and rights of the original investigators. Davy himself felt that some explanation at least was due, in a paper which he transmitted to the Royal Society; and as the passage in question contained what, though perhaps not meant to be such, might easily be construed into an insinuation, that but for him, the results communicated in that paper might not have been obtained, it was not likely to conciliate. There is probably much truth in the excuse offered by his biographer, for the superciliousness charged against him upon this, and other occasions, that it was merely the cloak of a perpetual and painful timidity.

It is remarkable that, with a highly poetical temperament, he seems to have been senseless to the beauties of art. The wonders of the Louvre extracted no sign of pleasure: he paced the rooms with hurried steps, in apathy, roused only by the sight of an Antinous sculptured in alabaster, "Gracious Heaven!" he then exclaimed, "what a beautiful stalactite."

From Paris, Dec. 29th, he proceeded without visiting Auvergne, to Montpellier, Genoa, Florence, Rome, and Naples, which he reached May 8th, 1814. At various places he prosecuted his researches upon iodine; and at Florence, he availed himself of the great burning lens to experiment upon the combustion of the diamond, and other forms of carbon. At Naples and Rome he instituted a minute and laborious inquiry into the colours used in painting by the ancients; the results of which appeared in the *Philosophical Transactions* for 1815.

The autumn of 1815 is rendered memorable by the discovery of the safety-lamp, one of the most beneficial applications of science to economical purposes yet made, by which hundreds, perhaps thousands, of lives have been preserved. Davy was led to the consideration of this subject by an application from Dr. Gray, now Bishop of Bristol, the Chairman of a Society established in 1813, at Bishop-Wearmouth, to consider and promote the means of preventing accidents by fire in coal-pits. Being then in Scotland, he visited the mines on his return southward, and was supplied with specimens of fire-damp, which, on reaching London, he proceeded to examine. He soon discovered that the carburetted hydrogen gas, called fire-damp by the miners, would not explode when mixed with less than six, or more than fourteen times its volume of air; and further, that the explosive mixture could not be fired in tubes of small diameters and proportionate lengths. Gradually diminishing their dimensions, he arrived at the conclusion that a tissue of wire, in which the meshes do not exceed a certain small diameter, which may be considered as the ultimate limit of a series of such tubes, is impervious to the inflamed air; and that a lamp covered with such tissue, may be used with perfect safety even



in an explosive mixture, which takes fire, and burns within the cage, securely cut off from the power of doing harm. Thus when the atmosphere is so impure that the flame of the lamp itself cannot be maintained, the *Davy* still supplies light to the miner, and turns his worst enemy into an obedient servant. This invention, the certain source of large profit, he presented with characteristic liberality to the public. The words are preserved, in which when pressed to secure to himself the benefit of it by a patent, he declined to do so, in conformity with the high-minded resolution which he formed upon acquiring independent wealth, of never making his scientific eminence subservient to gain:—"I have enough for all my views and purposes, more wealth might be troublesome, and distract my attention from those pursuits in which I delight. More wealth could not increase my fame or happiness. It might undoubtedly enable me to put four horses to my carriage, but what would it avail me to have it said, that Sir Humphry drives his carriage and four?" He who used wealth and distinction to such good purpose, may be forgiven the weakness if he estimated them at too high a value.

The coal-owners of the north presented to him a service of plate, in testimony of their gratitude. He underwent, however, considerable vexation from claims to priority of invention, set up by some persons connected with the collieries, whose attention had been turned with very imperfect success to the same end. The controversy has long been settled in his favour, by the decision of the most eminent names in British science, and the general voice of the owners of the Newcastle coal-field; and while the pits are worked, the name of Davy, given by the colliers to the safety-lamp, cannot be forgotten.

In 1818 he again visited Naples, with a view of applying the resources of chemistry to facilitate the unrolling of the papyri found in Herculaneum. These, it is well known, are generally in a state resembling charcoal, often cemented into a solid mass, and the texture so entirely destroyed, that it is hardly possible to separate the layers. Examination of some specimens transmitted to England satisfied him that they had not been subjected to heat, and that instead of being a true charcoal, they were analogous to peat or to the lignite called Bovey coal. He concluded, therefore, that the rolls were cemented into one mass by a substance produced by fermentation in their vegetable substance, and hoped to be able so far to destroy this, as to facilitate the detaching one layer from another, without obliterating the writing. With this view he submitted fragments to the operation of chlorine and iodine, with such fair hope of success, that he was encouraged to

proceed to Naples; the Government furnishing him with every recommendation, and defraying the expenses of such assistants as he thought it necessary to take out. His success, however, fell short of his hopes; and partly from disappointment, partly from a belief that unfair obstacles were thrown in his way by interested persons, he abandoned the undertaking at the end of two months, having partially unrolled twenty-three MSS. and examined about one hundred and twenty, which offered no prospect of success. His visit to Naples led, however, to one conclusion of interest to geologists, that the strata which cover Herculaneum are not lava, but a tufa consolidated by moisture, and resembling that at Pompeii except in its hardness.

In October, 1818, Sir Humphry Davy was created a baronet, as a reward for his scientific services. Soon after his return to England in 1820, died Sir Joseph Banks, the venerable president of the Royal Society. Davy succeeded to the chair, which he retained till forced to quit it by ill health, zealous in fulfilling its duties, without relaxing in his private labours. It would have been better had he not obtained this honour. His scientific pride disgusted some; his aristocratic airs, unpardonable in one so humbly born, excited the ridicule of others. Much of this weakness may be traced to the pernicious effects of early flattery. Had he been content with chemical fame, he would have spared some mortifications and heart-burnings both to himself and others. His demeanour changed, immediately after the delivery of his first lecture. On the following day he dined with his early friend and patron, Sir Henry Englefield, who, speaking of his behaviour on that day after eighteen years had elapsed, said, "It was the last effort of expiring nature." Such frailties, though just grounds of censure and regret to his contemporaries, will be lost in the splendour of his discoveries. Yet is the observation of them not useless as a warning to others: for the higher the station, the more closely will the actions of him who fills it be scrutinised, especially if his elevation be the work of his own hands.

In 1823 he undertook, in consequence of an application from Government to the Royal Society, an inquiry into the possibility of preventing the rapid decay of the copper sheathing of ships. His former Voltaic discoveries at once explained the cause and suggested a remedy. When two metals in contact with each other are exposed to moisture, the more oxidable rapidly decays, while on the less oxidable no effect is produced. Thus a very small piece of iron or zinc was found effectually to stop the solution of a very large surface of copper. Several ships were accordingly fitted with *protectors*, as they were

called, which succeeded perfectly in preserving the copper; but their use was found to be attended by an evil greater than that which they remedied. The ships' bottoms grew foul with unexampled rapidity; and the protectors were finally abandoned by the Admiralty in 1828. This failure was a source of much ill-natured remark to the many whom Davy had offended, or who were jealous of his reputation, and of deep mortification to himself. Indeed he displayed an impatience of censure, and irritability of temper, far from dignified: the spoilt child of fortune, he could not bear the feeling of defeat, still less the triumph of his enemies. This weakness may perhaps be partly ascribed to declining health, which must always more or less overcloud the mind, especially of one whose amusements as well as his employments were of an active and stirring kind. To the sports of fly-fishing and shooting he was devotedly attached; and jealous, even to a ludicrous degree, of his reputation and success, which is said not always to have been so great as he would willingly have had it believed. But his failing health gradually curtailed his enjoyment of these pleasures, and towards the end of 1825, the indisposition which his friends had long seen stealing on him reached its crisis in the form of an apoplectic attack. All immediate cause of alarm was soon removed; but the traces of his illness remained in a slight degree of paralysis, which impaired, though without materially affecting, his muscular powers. By the advice of his physicians he hastened abroad, and passed the rest of the winter, and the spring, at Ravenna. In the summer he visited the Tyrol and Illyria, and finding his health still precarious, resigned the chair of the Royal Society. In the autumn he returned to England, having gained little strength. The early winter he spent in Somersetshire, at the house of an old and valued friend, too weak for severe mental exertion, or to pursue successfully his favourite sports. Yet the ruling passion was still shewn in the amusement of his sick hours, which were chiefly devoted to the preparation of 'Salmonia.' Of the merits of this book as a manual for the fly-fisher, we presume not to speak. To the general reader it may be safely recommended, as containing many eloquent and poetical passages, with much amusing information respecting the varieties and habits of the trout and salmon species, and of the insect tribes on which they feed.

In the spring of 1828, Davy once more sought the Continent in search of health. His steps were turned to that favourite district, of which he speaks as the "most glorious country in Europe, Illyria and Styria;" where he solaced the weary hours of sickness, by such field-sports as his failing health enabled him to pursue, in the revision of an

improved edition of 'Salmonia,' and in the composition of the 'Last Days of a Philosopher.' Of this he says, in a letter dated Rome, February 6, 1829, "I write and philosophize a good deal, and have nearly finished a work with a higher aim than 'Salmonia.' It contains the essence of my philosophical opinions, and some of my poetical reveries." Under this sanction, the reader will peruse with pleasure the sketch contained in the third dialogue of a geological history of the earth, and the other questions of natural philosophy which are discussed. A large portion of the work is occupied by metaphysical and religious disquisitions. As a moral philosopher, his opinions do not seem entitled to peculiar weight. Of his visionary excursion to the limits of the solar system, it is not fair to speak but as the play of an exuberant imagination, mastering the sober faculties of the mind. The work contains many passages, reflective and descriptive, of unusual beauty; and is a remarkable production to have been composed under the wasting influence of that disease, which, of all others, usually exerts the most benumbing influence.

The winter of 1828-9, he spent at Rome; with returning spring, he expressed a wish to visit Geneva, but his hours were numbered. He reached that city on May 28, unusually cheerful; dined heartily on fish, and desired to be daily supplied with every variety which the lake afforded: a trifling circumstance, yet interesting from its connection with his love of sport. In the course of the night he was seized with a fresh attack, and expired early in the morning without a struggle. His remains were honoured by the magistrates with a public funeral, and repose in the cemetery of Plain Palais. He died without issue, and the baronetcy is in consequence extinct.



1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65  
66  
67  
68  
69  
70  
71  
72  
73  
74  
75  
76  
77  
78  
79  
80  
81  
82  
83  
84  
85  
86  
87  
88  
89  
90  
91  
92  
93  
94  
95  
96  
97  
98  
99  
100



Engraved by A. H. Hall

KOSCHUTZKO,

(From a sheet captured in 1824  
by Dr. Wajszynski a Pole.)

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

*London: Published by Charles Knicker, Pall Mall East.*

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete them.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress to ensure that the project is on track.

5. The final step is to evaluate the results of the project. This involves assessing the outcomes against the objectives and goals and identifying any areas for improvement.

[illegible]

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

2. Once the problem is identified, the next step is to define the objectives and goals of the project. This helps to clarify what needs to be achieved and provides a clear direction for the team.

3. The third step is to develop a plan or strategy to address the problem. This involves breaking down the problem into smaller, manageable tasks and determining the resources needed to complete them.

4. The fourth step is to implement the plan. This involves putting the strategy into action and monitoring progress regularly to ensure that the project is on track.

5. Finally, the fifth step is to evaluate the results of the project. This involves assessing the outcomes against the objectives and goals to determine the effectiveness of the intervention.







AMONG the remarkable men of modern times, there is perhaps none, whose fame is purer from reproach, than that of Thaddeus Kosciusko. His name is enshrined in the ruins of his unhappy country, which, with heroic bravery and devotion, he sought to defend against foreign oppression, and foreign domination. Kosciusko was born at Warsaw, about the year 1755. He was educated at the school of Cadets, in that city, where he distinguished himself so much in scientific studies as well as in drawing, that he was selected as one of four students of that institution, who were sent to travel at the expense of the state, with a view of perfecting their talents. In this capacity he visited France, where he remained for several years, devoting himself to studies of various kinds. On his return to his own country, he entered the army, and obtained the command of a company. But he was soon obliged to expatriate himself again, in order to fly from a violent but unrequited passion, for the daughter of the Marshal of Lithuania, one of the first officers of state of the Polish court.

He bent his steps to that part of North America, which was then waging its war of independence against England. Here he entered the army, and served with distinction as one of the adjutants of General Washington. While thus employed, he became acquainted with La Fayette, Lameth, and other distinguished Frenchmen, serving in the same cause ; and was honoured by receiving the most flattering praises from Franklin, as well as the public thanks of the congress of the United Provinces. He was also decorated with the new American order of Cincinnatus, being the only European, except La Fayette, to whom it was given.

At the termination of the war he returned to his own country, where he lived in retirement till the year 1789, at which period he was

promoted by the Diet, to the rank of Major-General. That body was at this time endeavouring to place its military force upon a respectable footing, in the vain hope of restraining and diminishing the domineering influence of foreign powers, in what still remained of Poland. It also occupied itself in changing the vicious constitution of that unfortunate and ill-governed country—in rendering the monarchy hereditary—in declaring universal toleration—and in preserving the privileges of the nobility, while at the same time it ameliorated the condition of the lower orders. In all these improvements, Stanislas Poniatowski, the reigning king, readily concurred; though the avowed intention of the Diet was, to render the crown hereditary in the Saxon family. The King of Prussia (Frederic William II.), who, from the time of the Treaty of Cherson in 1787, between Russia and Austria, had become hostile to the former power, also encouraged the Poles in their proceedings; and even gave them the most positive assurances of assisting them, in case the changes they were effecting occasioned any attacks from other sovereigns.

Russia at length, having made peace with the Turks, prepared to throw her sword into the scale. A formidable opposition to the measures of the Diet had arisen, even among the Poles themselves, and occasioned what was called the confederation of Targowicz, to which the Empress of Russia promised her assistance. The feeble Stanislas, who had proclaimed the new constitution, in 1791, bound himself in 1792 to sanction the Diet of Grodno, which restored the ancient constitution, with all its vices and all its abuses. In the meanwhile, Frederic William, King of Prussia, who had so mainly contributed to excite the Poles to their enterprises, basely deserted them, and refused to give them any assistance. On the contrary, he stood aloof from the contest, waiting for that share of the spoil, which the haughty Empress of the north might think proper to allot to him, as the reward of his non-interference.

But though thus betrayed on all sides, the Poles were not disposed to submit without a struggle. They flew to arms, and found in the nephew of their king, the Prince Joseph Poniatowski, a general worthy to conduct so glorious a cause. Under his command Kosciusko first became known in European warfare. He distinguished himself in the battle of Zieloniec, and still more in that of Dubienska, which took place on the 18th of June, 1792. Upon this latter occasion, he defended for six hours, with only four thousand men, against fifteen thousand Russians, a post which had been slightly fortified in twenty-four hours, and at last retired with inconsiderable loss.

But the contest was too unequal to last; the patriots were over-

whelmed by enemies from without, and betrayed by traitors within, at the head of whom was their own sovereign. The Russians took possession of the country, and proceeded to appropriate those portions of Lithuania and Volhynia, which suited their convenience; while Prussia, the friendly Prussia, invaded another part of the kingdom.

Under these circumstances, the most distinguished officers in the Polish army retired from the service, and of this number was Kosciusko. Miserable at the fate of his unhappy country, and at the same time an object of suspicion to the ruling powers, he left his native land, and retired to Leipsic; where he received intelligence of the honour which had been conferred upon him by the Legislative Assembly of France, who had invested him with the quality of a French citizen.

But his fellow-countrymen were still anxious to make another struggle for independence; and they unanimously selected Kosciusko as their chief and generalissimo. He obeyed the call, and found the patriots eager to combat under his orders. Even the noble Joseph Poniatowski, who had previously commanded in chief, returned from France, whither he had retired, and received from the hands of Kosciusko the charge of a portion of his army.

The patriots had risen in the north of Poland, to which part Kosciusko first directed his steps. Anxious to begin his campaign with an action of vigour, he marched rapidly towards Cracow, which town he entered triumphantly on the 24th of March, 1794. He forthwith published a manifesto against the Russians; and then, at the head of only five thousand men, he marched to meet their army. He encountered, on the 4th of April, ten thousand Russians at a place called Wraclawic; and entirely defeated them, after a combat of four hours. He returned in triumph to Cracow, and shortly afterwards marched along the left bank of the Vistula to Polaniec, where he established his head quarters.

Meanwhile the inhabitants of Warsaw, animated by the recital of the heroic deeds of their countrymen, had also raised the standard of independence, and were successful in driving the Russians from the city, after a murderous conflict of three days. In Lithuania and Samogitia an equally successful revolution was effected, before the end of April; while the Polish troops stationed in Volhynia and Podolia, marched to the reinforcement of Kosciusko.

Thus far fortune seemed to smile upon the cause of Polish freedom—the scene was, however, about to change. The undaunted Kosciusko, having first organized a national council to conduct the affairs of government, again advanced against the Russians. On his

march, he met a new enemy, in the person of the faithless Frederic William of Prussia; who, without having even gone through the preliminary of declaring war, had advanced into Poland, at the head of forty thousand men.

Kosciusko, with but thirteen thousand men, attacked the Prussian army on the 8th of June, at Szcekociny. The battle was long and bloody; at length, overwhelmed with numbers, he was obliged to retreat towards Warsaw. This he effected in so able a manner, that his enemies did not dare to harass him in his march; and he effectually covered the capital, and maintained his position for two months against vigorous and continued attacks. Immediately after this reverse the Polish General Zaiionczek lost the battle of Chelm, and the Governor of Cracow had the baseness to deliver the town to the Prussians, without attempting a defence.

These disasters occasioned disturbances among the disaffected at Warsaw, which, however, were put down by the vigour and firmness of Kosciusko. On the 13th of July, the forces of the Prussians and Russians, amounting to fifty thousand men, assembled under the walls of Warsaw, and commenced the siege of that city. After six weeks spent before the place, and a succession of bloody conflicts, the confederates were obliged to raise the siege; but this respite to the Poles was but of short duration.

Their enemies increased fearfully in number, while their own resources diminished. Austria now determined to assist in the annihilation of Poland, and caused a body of her troops to enter that kingdom. Nearly at the same moment, the Russians ravaged Lithuania; and the two corps of the Russian army, commanded by Suwarof and Fersen, effected their junction in spite of the battle of Krupezyce, which the Poles had ventured upon with doubtful issue, against the first of these commanders, on the 16th of September.

Upon receiving intelligence of these events, Kosciusko left Warsaw and placed himself at the head of the Polish army. He was attacked by the very superior forces of the confederates on the 10th of October, 1794, at a place called Macieiowice; and for many hours supported the combat against overwhelming odds. At length he was severely wounded, and as he fell, he uttered the prophetic words, "*Finis Polonia.*" It is asserted, that he had exacted from his followers an oath, not to suffer him to fall alive into the hands of the Russians, and that in consequence the Polish cavalry, being unable to carry him off, inflicted some severe sabre wounds on him, and left him for dead on the field; a savage fidelity, which we half admire even in condemning it.

Be this as it may, he was recognized and delivered from the plunderers by some Cossack chiefs ; and thus was saved from death to meet a scarcely less harsh fate—imprisonment in a Russian dungeon.

Thomas Wawrzecki became the successor of Kosciusko in the command of the army ; but with the loss of their heroic leader, all hope had deserted the breasts of the Poles. They still, however, fought with all the obstinacy of despair, and defended the suburb of Warsaw, called Praga, with great gallantry. At length this post was wrested from them. Warsaw itself capitulated on the 9th of November, 1794 ; and this calamity was followed by the entire dissolution of the Polish army on the 18th of the same month.

During this time, Kosciusko remained in prison at Petersburg ; but, at the end of two years, the death of his persecutress the Empress Catherine released him. One of the first acts of the Emperor Paul was to restore him to his liberty, and to load him with various marks of his favour. Among other gifts of the autocrat was a pension, by which, however, the high-spirited patriot would never consent to profit. No sooner was he beyond the reach of Russian influence than he returned to the donor the instrument, by which this humiliating favour was conferred. From this period the life of Kosciusko was passed in retirement. He went first to England, and then to the United States of America. He returned to the Old World in 1798, and took up his abode in France, where he divided his time between Paris, and a country house he had bought near Fontainebleau. While here he received the appropriate present of the sword of John Sobieski, which was sent to him by some of his countrymen serving in the French armies in Italy, who had found it in the shrine at Loretto.

Napoleon, when about to invade Poland in 1807, wished to use the name of Kosciusko, in order to rally the people of the country round his standard. The patriot, aware that no real freedom was to be hoped for under such auspices, at once refused to lend himself to his wishes. Upon this the Emperor forged Kosciusko's signature to an address to the Poles, which was distributed throughout the country. Nor would he permit the injured person to deny the authenticity of this act in any public manner. The real state of the case was, however, made known to many through the private representations of Kosciusko ; but he was never able to publish a formal denial of the transaction till after the fall of Napoleon.

When the Russians in 1814 had penetrated into Champagne, and were advancing towards Paris, they were astonished to hear that their former adversary was living in retirement in that part of the country.

The circumstances of this discovery were striking: The commune in which Kosciusko lived was subjected to plunder, and among the troops thus engaged he observed a Polish regiment. Transported with anger he rushed among them, and thus addressed the officers: "When I commanded brave soldiers they never pillaged; and I should have punished severely subalterns who allowed of disorders such as those which we see around. Still more severely should I have punished older officers, who authorized such conduct by their culpable neglect."—"And who are you," was the general cry, "that you dare to speak with such boldness to us?"—"I am Kosciusko." The effect was electric: the soldiery cast down their arms, prostrated themselves at his feet, and cast dust upon their heads according to a national usage, supplicating his forgiveness for the fault which they had committed. For twenty years the name of Kosciusko had not been heard in Poland save as that of an exile; yet it still retained its ancient power over Polish hearts; a power never used but for some good and generous end.

The Emperor Alexander honoured him with a long interview, and offered him an asylum in his own country. But nothing could induce Kosciusko again to see his unfortunate native land. In 1815, he retired to Soleure, in Switzerland; where he died, October 16th, 1817, in consequence of an injury received by a fall from his horse. Not long before he had abolished slavery upon his Polish estate, and declared all his serfs entirely free, by a deed registered and executed with every formality that could ensure the full performance of his intention. The mortal remains of Kosciusko were removed to Poland at the expense of Alexander, and have found a fitting place of rest in the cathedral of Cracow, between those of his companion in arms, Joseph Poniatowski, and the greatest of Polish warriors, John Sobieski.



100



Engraved by R. W. Dean

JOHN FLAXMAN.

*From the original Picture by  
John Jackson.  
in the possession of the Right Hon. Lord Dover.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge.

London Published by Charles Knight Pall Mall East









It was not till the time of Banks and Flaxman, that the English school had produced any notable specimens of the lofty and heroic style in sculpture. Wilton, Bacon, and Nollekens, were respectable in their line, which was nearly confined to allegorical monuments and busts. Roubilliac, though eminently unclassical, possessed a superior style of art, and has executed some works which for strength and liveliness of expression may challenge competition in this or any other country. But the attainments and genius of the two first-mentioned artists were of a different, and a loftier class. Those, however, who trace the history of the lives of Flaxman and Banks, will find, that whatever they achieved in the higher departments of sculpture was due solely to their ardent pursuit of excellence, almost unaided by that patronage, which, in this country, has been so liberally bestowed on other branches of the fine arts.

The heroic beauty and noble proportions of the Mourning Achilles, fully establish the claim of Banks to a high rank as a poetic sculptor ; this fine work of art, however, remained for years in plaster during his life, and after his death was presented to the British Gallery, where it now stands in the hall, " as a warning," observes Mr. Allan Cunningham, " to all sculptors who enter, that works of classic fancy find slender encouragement here !" With respect to Flaxman, in an early period of his professional career, he executed the outline illustrations of Homer, Æschylus, and Dante, which at once established his fame ; and yet, during a long life, no single patron called upon him to embody in marble any one of these lofty conceptions, the very existence of which forms the chief glory of the English school of poetic design.

The progress of sculpture in this country has been very recently traced by Mr. Allan Cunningham, in his amusing ' Memoirs of

British Sculptors.' Of these, the last, and most interesting, is that of Flaxman, from the spirited and amusing pages of which, together with the memoir prefixed to the Lectures on Sculpture, this short account has been chiefly extracted.

John Flaxman, the second son of a moulder of figures, who kept a shop in the Strand for the sale of plaster casts, was born in 1755. Like most who have been eminent as artists, he early manifested a taste for drawing. As soon as he could hold a pencil, he took delight in copying whatever he saw, and at an age when most children are engrossed with childish sports, he had read many books, and had begun to trace upon paper the lineaments and actions of those heroes who had engaged his fancy. Numerous stories are told of his fondness for that art to which his mature energies were devoted; and, allowing somewhat for the fond recollections of parents and friends, it is fully established that young Flaxman early showed proofs both of application and genius. To this development of his talents, his bodily constitution may have lent some aid, for his health from infancy was delicate, and a weak, and somewhat deformed frame, indisposed him from joining in the usual games of children.

His station in life did not enable him to profit by the common means of education; he gathered his knowledge from various sources, and mastered what he wanted by some of those ready methods which form part of the inspirations of genius. The introduction, through the means of an early patron, Mr. Mathew, to Mrs. Barbauld, contributed to improve his education and form his taste.

In his fifteenth year he became a student in the Royal Academy. Here he formed an intimacy with Blake and Stothard, both artists of original talent; but, like their more eminent companion, less favoured by fortune than many not so deserving of patronage and applause.

At the Academy, Flaxman obtained the silver medal, but in the contest for the gold one, he was worsted by Engleheart, a name now entirely forgotten. Flaxman, however, though humbled and mortified, was only stimulated by this defeat to greater exertions and more unwearied application.

The narrow circumstances of his father did not allow him to devote his whole time to unproductive study. His first employment was for the Wedgewoods; and to this fortunate combination of genius in the artist, and enterprise, skill, and taste in the manufacturers, the sudden and rapid improvement of the porcelain of this country is mainly to be ascribed. "The subjects executed by Flaxman were chiefly small

groups in very low relief, from subjects of ancient verse and history; many of which," observes Mr. A. Cunningham, "are equal in beauty and simplicity to his designs for marble: the Etruscan vases, and the architectural ornaments of Greece supplied him with the finest shapes; these he embellished with his own inventions, and a taste for forms of elegance began to be diffused over the land. Flaxman loved to allude, even when his name was established, to these humble labours; and since his death, the original models have been eagerly sought after." A set of chessmen, also executed for the Wedgewoods, are exceedingly beautiful.

Whilst earning by his labour a decent subsistence, he continued his devotion to the pursuit of his art, making designs from the Greek poets, the Pilgrim's Progress, and the Bible. He exhibited various works at the Academy; but it does not appear that he was enabled by patronage to execute any of these in marble, and it is, perhaps, owing to the little practice that he had in early life in this mode of working, that his admitted want of excellence in this branch of the art of sculpture is to be attributed.

In 1782 he left his father's home, and married an amiable and accomplished woman, whose society and affection formed the chief happiness of his after life. All those who knew them, describe in glowing terms the harmony and mutual affection in which they lived. In 1787 he determined to visit Rome. Two monuments which he executed before his departure deserve notice. One is in memory of Collins. It represents the poet seated, reading what he told Dr. Johnson was his only book, 'THE BIBLE,' whilst his lyre and poetical compositions lie neglected on the ground. The second is erected in Gloucester cathedral, to Mrs. Morley, who perished with her child at sea, and is represented as rising with the infant from the waves, at the summons of angels. The simple and serene beauty of this work is admirably suited for monumental sculpture.

How he profited whilst at Rome by the study of those noble specimens of ancient art, to which modern artists resort as the best school of excellence, is shown in the outline illustrations of Homer, Æschylus, and Dante; works which spread his fame throughout Europe, and at once stamped the character of the English School of Design. These compositions, which have been the admiration of every nation where art is cultivated, which have been repeatedly published in Germany and Italy, as well as in England, and which have been commented on with unlimited praise by Schlegel, and almost every other modern writer on the fine arts, were made, the

Homeric series for fifteen shillings; those taken from *Æschylus* and Dante, for one guinea each. It is not creditable to English taste that this country does not possess a single group, or even bas-relief, executed from them, although the author lived for more than thirty years after their publication.

Of the illustrations of the *Iliad*, there are in all thirty-nine; of the *Odyssey*, thirty-four. Of the designs from Dante, thirty-eight are taken from the Hell, thirty-eight from the Purgatory, and thirty-three from the Paradise. The Homeric series was made for Mrs. Hare. The illustrations of *Æschylus* were undertaken at the desire of the Countess Spencer; and those of the *Divina Commedia* were executed for Mr. Thomas Hope, one of Flaxman's early patrons, for whom, whilst at Rome, he executed in marble a very beautiful small-sized group of *Cephalus* and *Aurora*.

Of these three series, the Homeric is the most popular. This preference may, perhaps, be accounted for by the Grecian poem being more generally familiar than that of Dante: yet the subject of the *Divina Commedia* in many respects appears to have been more congenial to the talents of the artist; and perhaps an impartial judgment will pronounce, that of all the works of Flaxman, the designs from Dante best exhibit his peculiar genius. During his stay at Rome he executed for Frederick, Earl of Bristol and Bishop of Derry, a group in marble, which consisted of four figures larger than life, representing the fury of *Athamas*, from Ovid's *Metamorphoses*: by this he lost money, the price agreed on being only six hundred guineas; a sum insufficient to cover the expenses of the work. The recollection of this piece of patronage was so disgusting, to use the word by which he himself once characterized it, that in after life he could not bear to talk on the subject.

Whilst in Italy he made numerous drawings and memoranda upon ancient art, which afterwards formed the groundwork of his lectures on sculpture. After an absence of seven years he returned to England, and engaged a house in Buckingham-street, in which he continued to reside till his death.

His first great work after his return was a monument to the Earl of Mansfield. In 1797 he was elected an associate, and in 1800, a member of the Royal Academy, to which he presented, on his admission, a marble group of *Apollo* and *Marpessa*. He visited for a short time, in 1802, the splendid collections of the Louvre, in order to revive his early recollection of the works of art which had been brought from Rome. In 1810, a professorship of sculpture having

been established by the Academy, he was elected to fill the chair, and his lectures were commenced in 1811. Those who had formed high expectations of eloquence, and of felicity of diction and illustration, were disappointed. The sedate gravity of his manner, his unimpassioned tone, and the somewhat dull catalogue of statues and works of art which he occasionally introduced, conduced to tire a general audience. But the ten lectures, which have been published since his death, must always furnish an important manual to every student in sculpture. The lectures on Beauty, and the contrast of Ancient and Modern Sculpture, are peculiarly interesting, and embody nearly all which can be said on the leading principles of art. In addition to these lectures he wrote several anonymous articles, which are enumerated by Mr. Cunningham. These were the 'Character of the Works of Romney,' for Hayley's life of that artist, and either the whole or part of the articles, Armour, Basso-relievo, Beauty, Bronze, Bust, Composition, Cast, Ceres, in Rees's Cyclopædia. Many of the opinions put forth in these different essays he has embodied in his lectures.

Besides the designs already noticed, he executed numerous illustrations of the Pilgrim's Progress, forty designs for Sotheby's translation of Oberon, and thirty-six designs from Hesiod, illustrating the story of Pandora, and exhibiting the effects of her descent on earth. The subjects from Hesiod were those in which his poetic fancy appeared most to delight.

In 1820, Flaxman lost his wife, with whom he had lived in uninterrupted happiness for thirty-eight years, and from the effects of this bereavement he seemed never entirely to recover. A beloved sister, and the sister of her whom he most loved, remained to him, and continued his companions till his death.

At the time of this domestic misfortune the artist was in the zenith of his fame. Commissions poured in, and among them, one order especially worthy of his talents, for a group of the Archangel Michael vanquishing Satan, given by the Earl of Egremont, a nobleman who has omitted no opportunity of patronising the fine arts in this country. This group exhibits more grandeur of conception than any work of art of modern times. Unfortunately the marble of which it was cut was much discoloured, and the work was not entirely finished at his death. Amongst the finest of Flaxman's later productions, Mr. Cunningham enumerates his Pysche, the pastoral Apollo (also in the possession of Lord Egremont), and two small statues of Michael Angelo and Raphael. But



THE illustrious discoverer of the true planetary motions, whose features are represented on the accompanying plate, lived during the latter part of the fifteenth century, and the first half of the following one. Notwithstanding the success and celebrity of the theory which still bears his name, the materials are very scanty for personal details regarding his life and character. This ignorance is not the result of recent neglect. A century had scarcely elapsed from the time of his death, when Gassendi, who, at the request of the poet Chapelain, undertook to compile an account of him, was forced to preface it by a similar declaration.

Whilst Europe rang from one end to the other with the fierce dispute to which the new views of the relation and motions of the heavenly bodies gave rise, the character, the situation and manner of life, almost the country, of the great author of the controversy, remained unknown to the greater number of his admirers and opponents. Even the name of the discoverer of the Copernican system now appears strange, except in the Latinised form of Copernicus, in which alone it occurs in his own writings and in those of his commentators.

Nicolas Cöpernik\*, to use his genuine appellation, was a native of Thorn, a city of Polish Prussia, situated on the river Weichsel or Vistula. He was born in the year 1473. Little is known of his parents, except that his father, whose name also was Nicolas, was a surgeon, and, as it is believed, of German extraction. The elder Cöpernik was undoubtedly a stranger at Thorn, where he was naturalized in 1462: he married Barbara, of the noble Polish family of Watzelrode. Luke, one of her brothers, attained the high dignity

\* The authority for this manner of spelling the name is Hartknoch, *Alt und Neues Preussen*. The inscription, Nicolao Copernico, which appears on the plate, is a literal copy of the inscription on the original picture.









Engraved by E. Scruton

NICOLAO COPERNICO.

*From a Picture in the possession of the Royal Society  
presented by Dr. Wall of Douay June 1770.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

London Published by Charles Knight Pall Mall East

11

of Bishop of Ermland in the year 1489, and the prospects of advancement which this connection held out to young Cöpernik, probably induced his father to destine him to the ecclesiastical profession. He acquired at home the first elements of a liberal education, and afterwards graduated at Cracow, where he remained till he received the diploma of Doctor in Arts and Medicine from that university. He is said to have made considerable proficiency in the latter branch of study; and possessed, even in more advanced life, so high a reputation for skill and knowledge, as to produce an erroneous belief that he had once followed medicine.

He also exhibited at an early age a very decided taste for mathematical studies, especially for astronomy; and attended the lectures, both public and private, of Albert Brudzewski, then mathematical professor at Cracow. Under his tuition, Copernicus, as we shall hereafter call him, became acquainted with the works of the astronomer, John Müller, (now more commonly known by his assumed appellation of Regiomontanus,) and the reputation of this celebrated man is said to have exercised a marked influence in deciding the bent of his future studies. Müller died at Rome a few years after the birth of Copernicus, and when the latter had reached an age capable of appreciating excellence and nourishing emulation, he found Müller's works disseminated through every civilized country of Europe, his genius and acquirements the subject of universal admiration, and his premature death still regretted as a public calamity. The feelings to which the contemplation of Müller's success gave rise, were still more excited by a journey into Italy, which Copernicus undertook about the year 1495. One of his brothers and his maternal uncle were already settled in Rome, which was therefore the point to which his steps eventually tended. He quitted home in his twenty-third year; when his diligence in cultivating the practical part of astronomy had already procured for him some reputation as a skilful observer. It seems to have been in contemplation of this journey that he began to study painting, in which he afterwards became a tolerable proficient.

Bologna was the first place at which he made any stay, being drawn thither by the reputation of the astronomical professor, Dominic Maria Novarra. Copernicus was not more delighted with this able instructor than Novarra with his intelligent pupil. He soon became an assistant and companion of Novarra in his observations, and in this capacity acquired considerable distinction, so that on his departure from Bologna and arrival at Rome, he found that his reputation had preceded him. He was appointed to a professorship in that

city, where he continued to teach mathematics for some years with considerable success.

It does not appear at what time Copernicus entered into holy orders : probably it may have been during his residence at Rome ; for on his return home he was named to the superintendence of the principal church in his native city Thorn. Not long afterwards his uncle Luke, who, in 1489, succeeded Nicolas von Thungen in the bishopric of Ermeland, enrolled him as one of the canons of his chapter. The cathedral church of the diocese of Ermeland is situated at Frauenburg, a small town built near one of the mouths of the Vistula, on the shore of the lake called Frische Haff, separated only by a narrow strip of land from the Gulf of Dantzic. In this situation, rendered unfavourable to astronomical observations by the frequent marshy exhalations rising from the river and lake, Copernicus took up his future abode, and made it the principal place of his residence during the remainder of his life. Here those astronomical speculations were renewed and perfected, the results of which have for ever consigned to oblivion the subtle contrivances invented by his predecessors to account for the anomalies of their own complicated theories.

But we should form a very erroneous opinion of the life and character of Copernicus, if we considered him, as it is probable that by most he is considered, the quiet inhabitant of a cloister, immersed solely in speculative inquiries. His disposition did not unfit him for taking an active share in the stirring events which were occurring around him, and it was not left entirely to his choice whether he would remain a mere spectator of them.

The chapter of Ermeland, at the time when he became a member of it, was the centre of a violent political struggle, in the decision of which Copernicus himself was called on to act a considerable part. In the latter half of the fifteenth century, a bitter war was carried on between the King of Poland and a military religious fraternity, called the Teutonic or German Knights of St. Mary of Jerusalem, who were incorporated towards the end of the twelfth century. Having been called into Prussia, they established themselves permanently in the country, built Thorn and several other cities, and gradually acquired a considerable share of independent power. On the death of Paul von Segendorf, bishop of Ermeland, Casimir, king of Poland, in pursuance of a design which he was then prosecuting, to get into his own hands the nomination to all the bishoprics in his dominions, appointed his secretary, Stanislas Opporowski, to the vacant see. The chapter of Ermeland proceeded notwithstanding to a separate nomination, and

elected Nicolas von Thungen. Opporowski, backed by Casimir, entered Ermeland at the head of a powerful army. From this period the new Bishop of Ermeland necessarily made common cause with the German Knights; they renounced their allegiance to the crown of Poland, and threw themselves on the protection of Matthias, king of Hungary. At length, Casimir finding himself unable to master the confederacy, separated Nicolas von Thungen from it, by agreeing to recognise him as Prince-Bishop of Ermeland, on the usual condition of homage. Nicolas thus became confirmed in his dignity, but his unhappy subjects did not fare better on that account, the country being now exposed to the fury of the German Knights, as it had suffered before from the violence of the Polish soldiery. These disturbances were continued during the life of Luke Watzelrode, and the city of Frauenburg, as well as its neighbour Braunsburg, frequently became the theatre of warlike operations.

The management of the see was often committed to the care of Copernicus during the absence of his uncle, who on political grounds resided for the most part at the Court; and his activity in maintaining the rights of the chapter rendered him especially obnoxious to the Teutonic Order. In one of the short intervals of tranquillity, they took occasion to cite him before the meeting of the States at Posen, on account of some of his reports to his uncle concerning their encroachments. Gassendi, who mentions this circumstance, merely adds that at length his own and his uncle's merit secured the latter in the possession of his dignity. In 1512 Watzelrode died, and Copernicus was chosen as administrator of the see until the appointment of the new bishop, Fabian von Losingen. In 1518 the knights under their grand master, Albert of Brandenburg, took possession of Frauenburg and burnt it to the ground.

During the following year hostilities continued in the immediate neighbourhood of Frauenburg, but in the course of that summer, negotiations for peace between the Teutonic Order and the King of Poland were begun, through the mediation of the bishop. At last a truce was agreed upon for four years, during which Fabian von Losingen died, and Copernicus was again chosen administrator of the bishopric. In 1525 peace was concluded with the Teutonic Knights, Albert having consented to receive Prussia as a temporal fief from the King of Poland. It was probably on this occasion that Copernicus was selected to represent the chapter of Ermeland at the Diet at Graudenz, where the terms of peace were finally settled; and by his firmness the chapter recovered great part of the possessions which had been endangered

during the war. This service to his chapter was followed by another of more widely extended importance. During the struggle, which had continued with little interruption for more than half a century, the currency had become greatly debased and depreciated; and one of the most important subjects of deliberation at the meeting at Graudenz related to the best method of restoring it. There was a great difference of opinion whether the intended new coinage should be struck according to the old value of the currency, or according to that to which it had fallen in consequence of its adulteration. To assist in the settlement of this important question, Copernicus drew up a table of the relative value of the coins, then in circulation throughout the country. He presented this to the States, accompanied by a memoir on the same subject, an extract from which may be seen in Hartknoch's History of Prussia. Throughout the troublesome period of which we have just given an outline, Copernicus seems to have displayed much political courage and talent. When tranquillity was at length restored, he resumed the astronomical studies which had been thus interrupted by more active duties.

There appears to be little doubt that the philosopher began to meditate on the ideas which led him to the true knowledge of the constitution of the solar system, at least as early as 1507. Every one, who has heard the name of Copernicus mentioned, is aware that before him the general belief was, that the earth occupies the centre of the universe; that the changes of day and night are produced by the rapid revolution of the heavens, such as our senses erroneously lead us to believe, until more accurate and complicated observation teaches us the contrary; that the change of seasons and apparent motions of the planetary bodies are caused by the revolution of the sun and planets from west to east round the earth, in orbits of various complexity, subject to the common daily motion of all from east to west.

Instead of the daily motion of the heavens from east to west, Copernicus substituted the revolution of the earth itself from west to east. He explained the other phenomena of the planetary motions by supposing the sun to be fixed, and the earth and other planets to revolve about him; not, however, in simple circular orbits, according to the popular view of the Copernican theory. It was absolutely necessary to retain much of the old machinery of deferent and epicycle so long as the prejudice existed, from which Copernicus himself was not free, that nothing but circular motion is to be found in the heavens. Another step was made by the following generation, and astronomers were taught by Kepler to believe that the circular motion which



they were so anxious to preserve in their theories, has no real existence in the planetary orbits. The advantage of the new system above the old, was, that by not denying to the earth the motion which it really possesses, the author had to invent epicycles to explain only the real irregularities of the motions of the other planets, and not those apparent ones which arise out of the motion of the orb from which they are viewed.

It is commonly said that besides the two motions already mentioned, Copernicus attributed to the earth a third annual revolution on its axis. This was necessary from the idea which he had formed of its motion in its orbit. He conceived the earth to be carried round as if resting on a lever centred in the sun, which would cause the poles of the daily motion to point successively to different parts of the heavens; the third motion was added to restore these poles to their true position in every part of the orbit. It was afterwards seen that these two annual motions might be considered as resulting from one of a different kind, and in this simpler form they are now always considered by astronomical writers.

It would be an interesting inquiry to follow Copernicus through the train of reasoning which induced him to venture upon these changes; but it is impossible to attempt this, or to explain his system, within the limits to which this sketch is necessarily confined. In one point of view, his peculiar merit appears not to be in general sufficiently insisted upon. If he had merely suggested the principles of his new theory, he would doubtless have acquired, as now, the glory of lighting upon the true order of the solar system, and of founding thereupon a new school of astronomy: but his peculiar and characteristic merit, that by which he really earned his reputation, and which entitles him to take rank by the side of Newton in the history of astronomy, was the result of his conviction, that if his principles were indeed true, they would be verified by the examination of details, and the persevering resolution with which he thereupon set himself to rebuild an astronomical theory from the foundation. This was the reason, at least as much as the fear of incurring censure, why he delayed the publication of his system for thirty-six years. During the greater part of that time he was employed in collecting, by careful observation, the materials of which it is constructed: the opinions on which it is based, comprising the whole of what was afterwards declared to be heretical and impious, were widely known to be entertained by him long before the work itself appeared. He delayed to announce them formally, until he was able at the same time to show that they were

not random guesses, taken up from a mere affectation of novelty ; but that with their assistance he had compiled tables of the planetary motions, which were immediately acknowledged even by those whose minds revolted most against the means by which they were obtained, to be far more correct than any which till then had appeared.

Copernicus's book seems to have been nearly completed in 1536, which is the date of a letter addressed to him by Cardinal Schonberg, prefixed to the work. So far at this time was the church of Rome from having decided on the line of stubborn opposition to the new opinions, which, in the following century, so much to her own disgrace, she adopted, that Copernicus was chiefly moved to complete and publish his work by the solicitations of this cardinal, and of Tindemann Giese, the bishop of Culm ; and the book itself was dedicated to Pope Paul III. It is entitled, '*De Revolutionibus Orbium Coelestium, Libri VI.*' The dedication is written in a very different strain from that to which his followers were soon afterwards restricted. He there boldly avows his expectation that his theory would be attacked as contrary to the Scriptures, and his contempt of such ill-considered judgment. A more timid preface, in which the new theory is spoken of as a mere mathematical hypothesis, was added to this dedication by Osiander, to whom Copernicus had entrusted the care of preparing the book for publication. It has been said that the author was far from approving this, and if his death had not followed closely upon its publication, it is not improbable that he would have suppressed it.

The revolution of opinion that has followed the publication of this memorable work was not immediately perceptible : even to the end of the sixteenth century, as Montucla observes, the number of converts to its doctrines might be easily reckoned. The majority contented themselves with a disdainful sneer at the folly of introducing such ridiculous notions among the grave doctrines of astronomy : but although impertinent, it was as yet considered harmless ; and all those who were at the pains to examine the reasoning on which the new theory was grounded, were allowed, unmolested, to own themselves convinced by it. It was not until the spirit of philosophical inquiry was fully awakened, that the church of Rome became sensible how much danger lurked in the new doctrines ; and when the struggle began in earnest between the partisans of truth and falsehood, the censures pronounced upon the advocates of the earth's motion, were in fact aimed through them at all who presumed, even in natural phenomena, to see with other eyes than those of their spiritual advisers.

Copernicus did not live to witness any part of the effect produced

by his book. A sudden attack of dysentery and paralysis put an end to his life, within a few hours after the first printed copy had been shown to him, in his seventy-second year, on the 24th May, 1543, one century before the birth of Newton. The house at Thorn, in which he is said to have been born, is still shown, as well as that at Frauenburg, in which he passed the greater part of his life. An hydraulic machine, of which only the remains now exist, for supplying the houses of the canons with water, and another of similar construction at Graudenz, which is still in use, are said to have been constructed by him. An account of them may be seen in Nanke's Travels. From the little that is known of Copernicus's private character, his morals appear to have been unexceptionable; his temper good, his disposition kind, but inclining to seriousness. He was so highly esteemed in his own neighbourhood, that the attempt of a dramatic author to satirise him, by introducing his doctrine of the earth's motion upon the stage at Elbing, was received by the audience with the greatest indignation. He was buried in the cemetery of the chapter of Ermeland, and only a plain marble slab, inscribed with his name, marked the place of his interment. Until this was re-discovered in the latter half of the last century, an opinion prevailed that his remains had been transported to Thorn, and buried in the church of St. John, where the portrait of him is preserved, from which most of the prints in circulation have been taken. It is engraved in Hartknoch's Prussia, and, according to that author, copies of it were frequently made. The portrait prefixed to Gassendi's life, is a copy of that given in Boissard, with the addition of a furred robe. There is a good engraving of the same likeness, by Falck, a Polish artist, who lived about a century later than Copernicus. In the year 1584, Tycho Brahe commissioned Elia Olai to visit Frauenburg, for the purpose of more accurately determining the latitude of Copernicus's observatory, and, on that occasion, received as a present from the chapter the Ptolemaic scales, made by the astronomer himself, which he used in his observatory, and also a portrait of him said to have been painted by his own hand. Tycho placed these memorials, with great honour, in his own observatory, but it is not known what became of them after his death, and the dispersion of his instruments. The portrait, from which the engraving prefixed to this account is taken, belongs to the Royal Society, to which it was sent by Dr. Wolff, from Dantzic, in 1776. It was copied by Lormann, a Prussian artist, from one which had been long preserved and recognised as an original in the collection of the Dukes of Saxe Gotha. In

1735, Prince Grabowski, bishop of Ermeland, exchanged for it the portrait of an ancestor of the reigning duke, who had been formerly bishop of that see. Grabowski left it to his chamberlain, M. Huszarzewski, in whose possession it remained when the copy was made. Dr. Wolff, in the letter accompanying his present, (inserted in the *Phil. Trans.* vol. lxvii.) declares that this original had been compared with the Thorn portrait, and that the resemblance of the two is perfect. It does not appear very striking in the engravings. A colossal statue of Copernicus, executed by Thorwaldsen, was erected at Warsaw in 1830, with all the demonstrations of honour due to the memory of a man who holds so distinguished a place in the history of human discoveries.



7-1-1942  
T-1-1-1942



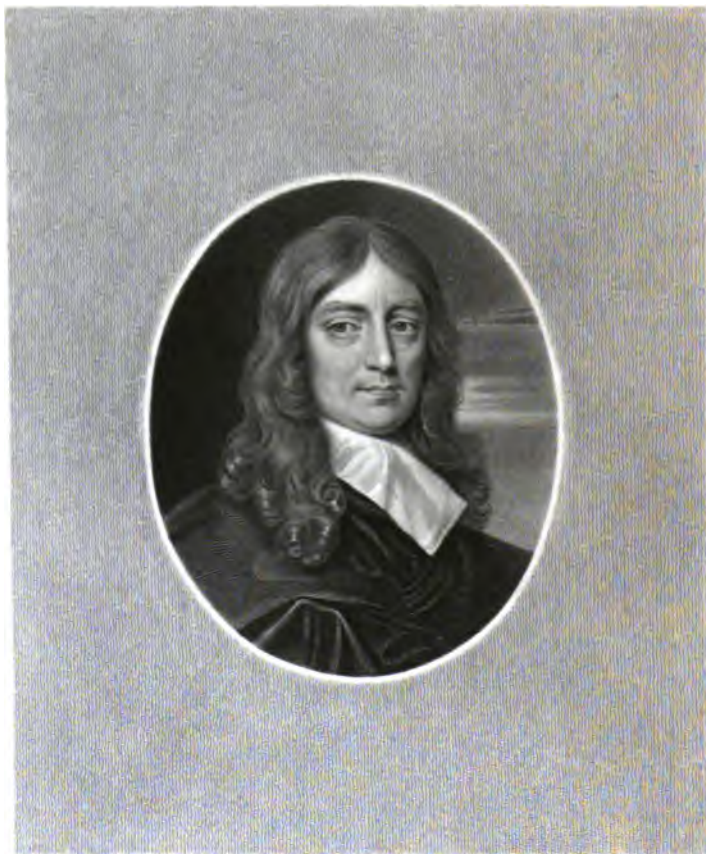
*Engraving by J. B. H. 1790*

JOHN WILKINS

*John Wilkins, Esq.*  
*of the Middle Temple*  
*London*

of the Middle Temple





Engraved by T. B. Smith

JOHN MILTON

*With a Description of the same, and his Poetical Works,  
in the possession of William Turner Esq.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

London: Printed by Charles Knight and Abel Knight







*Engraved by T. Boscawen.*

JOHN MILTON.

*From a Signature of the same size by T. Boscawen.*  
*in the possession of William Turner Esq.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge.

*London Published by Charles Knight, Finsbury Square.*







THAT sanctity which settles on the memory of a great man, ought upon a double motive to be vigilantly sustained by his countrymen; first, out of gratitude to him, as one column of the national grandeur; secondly, with a practical purpose of transmitting unimpaired to posterity the benefit of ennobling models. High standards of excellence are among the happiest distinctions by which the modern ages of the world have an advantage over earlier, and we are all interested by duty as well as policy in preserving them inviolate. To the benefit of this principle, none amongst the great men of England is better entitled than Milton, whether as respects his transcendent merit, or the harshness with which his memory has been treated.

John Milton was born in London on the 9th day of December, 1608. His father, in early life, had suffered for conscience' sake, having been disinherited upon his abjuring the popish faith. He pursued the laborious profession of a scrivener, and having realised an ample fortune, retired into the country to enjoy it. Educated at Oxford, he gave his son the best education that the age afforded. At first, young Milton had the benefit of a private tutor: from him he was removed to St. Paul's School; next he proceeded to Christ's College, Cambridge, and finally, after several years' preparation by extensive reading, he pursued a course of continental travel. It is to be observed, that his tutor, Thomas Young, was a Puritan, and there is reason to believe that Puritan politics prevailed among the fellows of his college. This must not be forgotten in speculating on Milton's public life, and his inexorable hostility to the established government in church and state;

for it will thus appear probable, that he was at no time withdrawn from the influence of Puritan connections.

In 1632, having taken the degree of M.A., Milton finally quitted the University, leaving behind him a very brilliant reputation, and a general good will in his own college. His father had now retired from London, and lived upon his own estate at Horton, in Buckinghamshire. In this rural solitude, Milton passed the next five years, resorting to London only at rare intervals, for the purchase of books or music. His time was chiefly occupied with the study of Greek and Roman, and, no doubt, also of Italian literature. But that he was not negligent of composition, and that he applied himself with great zeal to the culture of his native literature, we have a splendid record in his 'Comus,' which, upon the strongest presumptions, is ascribed to this period of his life. In the same neighbourhood, and within the same five years, it is believed that he produced also the *Arcades*, and the *Lycidas*, together with *L'Allegro*, and *Il Penseroso*.

In 1637 Milton's mother died, and in the following year he commenced his travels. The state of Europe confined his choice of ground to France and Italy. The former excited in him but little interest. After a short stay at Paris he pursued the direct route to Nice, where he embarked for Genoa, and thence proceeded to Pisa, Florence, Rome, and Naples. He originally meant to extend his tour to Sicily and Greece; but the news of the first Scotch war, having now reached him, agitated his mind with too much patriotic sympathy to allow of his embarking on a scheme of such uncertain duration. Yet his homeward movements were not remarkable for expedition. He had already spent two months in Florence, and as many in Rome, yet he devoted the same space of time to each of them on his return. From Florence he proceeded to Lucca, and thence, by Bologna and Ferrara, to Venice; where he remained one month, and then pursued his homeward route through Verona, Milan, and Geneva.

Sir Henry Wotton had recommended, as the rule of his conduct, a celebrated Italian proverb, inculcating the policy of reserve and dissimulation. From a practised diplomatist, this advice was characteristic; but it did not suit the frankness of Milton's manners, nor the nobleness of his mind. He has himself stated to us his own rule of conduct, which was to move no questions of controversy, yet not to evade them when pressed upon him by others. Upon this principle he acted, not without some offence to his associates, nor wholly without danger to himself. But the offence, doubtless, was blended with respect; the danger was passed; and he returned home with all his purposes fulfilled. He had

conversed with Galileo; he had seen whatever was most interesting in the monuments of Roman grandeur, or the triumphs of Italian art; and he could report with truth, that in spite of his religion, every where undissembled, he had been honoured by the attentions of the great, and by the compliments of the learned.

After fifteen months of absence, Milton found himself again in London at a crisis of unusual interest. The king was on the eve of his second expedition against the Scotch; and we may suppose Milton to have been watching the course of events with profound anxiety, not without some anticipation of the patriotic labour which awaited him. Meantime he occupied himself with the education of his sister's two sons, and soon after, by way of obtaining an honourable maintenance, increased the number of his pupils.

Dr. Johnson, himself at one period of his life a schoolmaster, on this occasion indulges in a sneer which is too injurious to be neglected. "Let not our veneration for Milton," says he, "forbid us to look with some degree of merriment on great promises and small performance: on the man who hastens home because his countrymen are contending for their liberty; and when he reaches the scene of action, vapours away his patriotism in a private boarding-school." It is not true that Milton had made "great promises," or any promises at all. But if he had made the greatest, his exertions for the next sixteen years nobly redeemed them. In what way did Dr. Johnson expect that his patriotism should be expressed? As a soldier? Milton has himself urged his bodily weakness and intellectual strength, as reasons for following a line of duty for which he was better fitted. Was he influenced in his choice by fear of military dangers or hardships? Far from it: "for I did not," he says, "shun those evils, without engaging to render to my fellow-citizens services much more useful, and attended with no less of danger." What services were those? We shall state them in his own words, anticipated from an after period. "When I observed that there are in all three modes of liberty—first, ecclesiastical liberty; secondly, civil liberty; thirdly, domestic: having myself already treated of the first, and noticing that the magistrate was taking steps in behalf of the second, I concluded that the third, that is to say, domestic, or household liberty, remained to me as my peculiar province. And whereas this again is capable of a threefold division, accordingly as it regards the interests of conjugal life in the first place, or those of education in the second, or finally the freedom of speech, and the right of giving full publication to sound opinions,—I took it upon myself to defend all three, the first, by my Doctrine and Discipline of

Divorce, the second, by my Tractate upon Education, the third, by my Areopagitica."

In 1641 he conducted his defence of ecclesiastical liberty, in a series of attacks upon episcopacy. These are written in a bitter spirit of abusive hostility, for which we seek an insufficient apology in his exclusive converse with a party which held bishops in abhorrence, and in the low personal respectability of a large portion of the episcopal bench.

At Whitsuntide, in the year 1645, having reached his 35th year, he married Mary Powel, a young lady of good extraction in the county of Oxford. One month after, he allowed his wife to visit her family. This permission, in itself somewhat singular, the lady abused; for when summoned back to her home, she refused to return. Upon this provocation, Milton set himself seriously to consider the extent of the obligations imposed by the nuptial vow; and soon came to the conclusion, that in point of conscience it was not less dissoluble for hopeless incompatibility of temper than for positive adultery, and that human laws, in as far as they opposed this principle, called for reformation. These views he laid before the public in his *Doctrine and Discipline of Divorce*. In treating this question, he had relied entirely upon the force of argument, not aware that he had the countenance of any great authorities; but finding soon afterwards that some of the early reformers, Bucer and P. Martyr, had taken the same view as himself, he drew up an account of their comments on this subject. Hence arose the second of his tracts on Divorce. Meantime, as it was certain that many would abide by what they supposed to be the positive language of Scripture, in opposition to all authority whatsoever, he thought it advisable to write a third tract on the proper interpretation of the chief passages in Scripture, which refer to this point. A fourth tract, by way of answer to the different writers who had opposed his opinions, terminated the series.

Meantime the lady, whose rash conduct had provoked her husband into these speculations, saw reason to repent of her indiscretion, and finding that Milton held her desertion to have cancelled all claims upon his justice, wisely resolved upon making her appeal to his generosity. This appeal was not made in vain: in a single interview at the house of a common friend, where she had contrived to surprise him, and suddenly to throw herself at his feet, he granted her a full forgiveness: and so little did he allow himself to remember her misconduct, or that of her family, in having countenanced her desertion, that soon afterwards, when they were involved in the general ruin of



the royal cause, he received the whole of them into his house, and exerted his political influence very freely in their behalf. Fully to appreciate this behaviour, we must recollect that Milton was not rich, and that no part of his wife's marriage portion (£1000) was ever paid to him.

His thoughts now settled upon the subject of education, which it must not be forgotten that he connected systematically with domestic liberty. In 1644 he published his essay on this great theme, in the form of a letter to his friend Hartlib, himself a person of no slight consideration. In the same year he wrote his 'Areopagitica, a speech for the liberty of unlicensed printing.' This we are to consider in the light of an oral pleading, or regular oration, for he tells us expressly [Def. 2.] that he wrote it "ad justæ orationis modum." It is the finest specimen extant of generous scorn. And very remarkable it is, that Milton, who broke the ground on this great theme, has exhausted the arguments which bear upon it. He opened the subject: he closed it. And were there no other monument of his patriotism and his genius, for this alone he would deserve to be held in perpetual veneration. In the following year, 1645, was published the first collection of his early poems: with his sanction, undoubtedly, but probably not upon his suggestion. The times were too full of anxiety to allow of much encouragement to polite literature: at no period were there fewer readers of poetry. And for himself in particular, with the exception of a few sonnets, it is probable that he composed as little as others read, for the next ten years: so great were his political exertions.

Early in 1649 the king was put to death. For a full view of the state of parties which led to this memorable event, we must refer the reader to the history of the times. That act was done by the Independent party, to which Milton belonged, and was precipitated by the intrigues of the Presbyterians, who were making common cause with the king, to ensure the overthrow of the Independents. The lamentations and outcries of the Presbyterians were long and loud. Under colour of a generous sympathy with the unhappy prince, they mourned for their own political extinction, and the triumph of their enemies. This Milton well knew, and to expose the selfishness of their clamours, as well as to disarm their appeals to the popular feeling, he now published his 'Tenure of Kings and Magistrates.' In the first part of this, he addresses himself to the general question of tyrannicide, justifying it, first, by arguments of general reason, and secondly, by the authority of the reformers. But in the latter part he argues the case personally, contending that the Presbyterians at least

were not entitled to condemn the king's death, who, in levying war, and doing battle against the king's person, had done so much that tended to no other result. "If then," is his argument, "in these proceedings against their king, they may not finish, by the usual course of justice, what they have begun, they could not lawfully begin at all." The argument seems inconclusive, even as addressed *ad hominem* : the struggle bore the character of a war between independent parties, rather than a judicial inquiry, and in war the life of a prisoner becomes sacred.

At this time the Council of State had resolved no longer to employ the language of a rival people in their international concerns, but to use the Latin tongue as a neutral and indifferent instrument. The office of Latin Secretary, therefore, was created, and bestowed upon Milton. His hours from henceforth must have been pretty well occupied by official labours. Yet at this time he undertook a service to the state, more invidious, and perhaps more perilous, than any in which his politics ever involved him. On the very day of the king's execution, and even below the scaffold, had been sold the earliest copies of a work, admirably fitted to shake the new government, and for the sensation which it produced at the time, and the lasting controversy which it has engendered, one of the most remarkable known in literary history. This was the 'Eikon Basilike, or Royal Image,' professing to be a series of meditations drawn up by the late king, on the leading events from the very beginning of the national troubles. Appearing at this critical moment, and co-operating with the strong reaction of the public mind, already effected in the king's favour by his violent death, this book produced an impression absolutely unparalleled in any age. Fifty thousand copies, it is asserted, were sold within one year; and a posthumous power was thus given to the king's name by one little book, which exceeded, in alarm to his enemies, all that his armies could accomplish in his life-time. No remedy could meet the evil in degree. As the only one that seemed fitted to it in kind, Milton drew up a running commentary upon each separate head of the original: and as that had been entitled the king's image, he gave to his own the title of 'Eikonoclastes, or Image-breaker,' "the famous surname of many Greek emperors, who broke all superstitious images in pieces."

This work was drawn up with the usual polemic ability of Milton; but by its very plan and purpose, it threw him upon difficulties which no ability could meet. It had that inevitable disadvantage which belongs to all ministerial and secondary works: the order and choice of topics being all determined by the Eikon, Milton, for the first time,

wore an air of constraint and servility, following a leader and obeying his motions, as an engraver is controlled by the designer, or a translator by his original. It is plain, from the pains he took to exonerate himself from such a reproach, that he felt his task to be an invidious one. The majesty of grief, expressing itself with Christian meekness, and appealing, as it were from the grave, to the consciences of men, could not be violated without a recoil of angry feeling, ruinous to the effect of any logic, or rhetoric the most persuasive. The affliction of a great prince, his solitude, his rigorous imprisonment, his constancy to some purposes which were not selfish, his dignity of demeanour in the midst of his heavy trials, and his truly Christian fortitude in his final sufferings—these formed a rhetoric which made its way to all hearts. Against such influences the eloquence of Greece would have been vain. The nation was spell-bound; and a majority of its population neither could or would be disenchanted.

Milton was ere long called to plead the same great cause of liberty upon an ampler stage, and before a more equitable audience; to plead not on behalf of his party against the Presbyterians and Royalists, but on behalf of his country against the insults of a hired Frenchman, and at the bar of the whole Christian world. Charles II. had resolved to state his father's case to all Europe. This was natural, for very few people on the continent knew what cause had brought his father to the block, or why he himself was a vagrant exile from his throne. For his advocate he selected Claudius Salmasius, and that was most injudicious. This man, eminent among the scholars of the day, had some brilliant accomplishments, which were useless in such a service, while in those which were really indispensable, he was singularly deficient. He was ignorant of the world, wanting in temper and self-command, conspicuously unfurnished with eloquence, or the accomplishments of a good writer, and not so much as master of a pure Latin style. Even as a scholar, he was very unequal; he had committed more important blunders than any man of his age, and being generally hated, had been more frequently exposed than others to the harsh chastisements of men inferior to himself in learning. Yet the most remarkable deficiency of all which Salmasius betrayed, was in his entire ignorance, whether historical or constitutional, of every thing which belonged to the case.

Having such an antagonist, inferior to him in all possible qualifications, whether of nature, of art, of situation, it may be supposed that Milton's triumph was absolute. He was now thoroughly indemnified for the poor success of his 'Eikonoclastes.' In that instance

he had the mortification of knowing that all England read and wept over the king's book, whilst his own reply was scarcely heard of. But here the tables were turned: the very friends of Salmasius complained, that while his defence was rarely inquired after, the answer to it, '*Defensio pro Populo Anglicano*,' was the subject of conversation from one end of Europe to the other. It was burnt publicly at Paris and Toulouse: and by way of special annoyance to Salmasius, who lived in Holland, was translated into Dutch.

Salmasius died in 1653, before he could accomplish an answer that satisfied himself: and the fragment which he left behind him was not published, until it was no longer safe for Milton to rejoin. Meantime others pressed forward against Milton in the same controversy, of whom some were neglected, one was resigned to the pen of his nephew, Philips, and one answered diffusely by himself. This was Du Moulin, or, as Milton persisted in believing, Morus, a reformed minister then resident in Holland, and at one time a friend of Salmasius. For two years after the publication of this man's book (*Regii Sanguinis Clamor*) Milton received multiplied assurances from Holland that Morus was its true author. This was not wonderful. Morus had corrected the press, had adopted the principles and passions of the book, and perhaps at first had not been displeased to find himself reputed the author. In reply, Milton published his '*Defensio Secunda pro Populo Anglicano*,' seasoned in every page with some stinging allusions to Morus. All the circumstances of his early life are recalled, and some were such as the grave divine would willingly have concealed from the public eye. He endeavoured to avert too late the storm of wit and satire about to burst on him, by denying the work, and even revealing the author's real name: but Milton resolutely refused to make the slightest alteration. The true reason of this probably was that the work was written so exclusively against Morus, full of personal scandal, and puns and gibes upon his name, which in Greek signifies foolish, that it would have been useless as an answer to any other person. In Milton's conduct on this occasion, there is a want both of charity and candour. Personally, however, Morus had little ground for complaint: he had bearded the lion by submitting to be reputed the author of a work not his own. Morus replied, and Milton closed the controversy by a defence of himself, in 1655.

He had, indeed, about this time some domestic afflictions, which reminded him of the frail tenure on which all human blessings were held, and the necessity that he should now begin to concentrate his mind upon the great works which he meditated. In 1651 his first wife

died, after she had given him three daughters. In that year he had already lost the use of one eye, and was warned by the physicians that if he persisted in his task of replying to Salmasius, he would probably lose the other. The warning was soon accomplished, according to the common account, in 1654; but upon collating his letter to Philaras the Athenian, with his own pathetic statement in the *Defensio Secunda*, we are disposed to date it from 1652. In 1655 he resigned his office of secretary, in which he had latterly been obliged to use an assistant.

Some time before this period, he had married his second wife, Catherine Woodcock, to whom it is supposed that he was very tenderly attached. In 1657 she died in child-birth, together with her child, an event which he has recorded in a very beautiful sonnet. This loss, added to his blindness, must have made his home, for some years, desolate and comfortless. Distress, indeed, was now gathering rapidly upon him. The death of Cromwell in the following year, and the imbecile character of his eldest son, held out an invitation to the aspiring intriguers of the day, which they were not slow to improve. It soon became too evident to Milton's discernment, that all things were hurrying forward to restoration of the ejected family. Sensible of the risk, therefore, and without much hope, but obeying the summons of his conscience, he wrote a short tract on the ready and easy way to establish a free commonwealth, concluding with these noble words, "Thus much I should perhaps have said, though I were sure I should have spoken only to trees and stones, and had none to cry to, but with the Prophet, Oh earth! earth! earth! to tell the very soil itself what her perverse inhabitants are deaf to. Nay, though what I have spoken should happen [which Thou suffer not, who didst create free, nor Thou next, who didst redeem us from being servants of men] to be the last words of our expiring liberty." A slighter pamphlet on the same subject, 'Brief Notes' upon a sermon by one Dr. Griffiths, must be supposed to be written rather with a religious purpose of correcting a false application of sacred texts, than with any great expectation of benefiting his party. Dr. Johnson, with unseemly violence, says, that he kicked when he could strike no longer: more justly it might be said that he held up a solitary hand of protestation on behalf of that cause now in its expiring struggles, which he had maintained when prosperous; and that he continued to the last one uniform language, though he now believed resistance to be hopeless, and knew it to be full of peril.

That peril was soon realised. In the spring of 1660, the Restoration was accomplished amidst the tumultuous rejoicings of the people.

It was certain that the vengeance of government would lose no time in marking its victims; for some of them in anticipation had already fled. Milton wisely withdrew from the first fury of the persecution, which now descended on his party. He secreted himself in London, and when he returned into the public eye in the winter, found himself no farther punished, than by a general disqualification for the public service, and the disgrace of a public burning inflicted on his *Eikonoclastes*, and his *Defensio pro Populo Anglicano*.

Apparently it was not long after this time that he married his third wife, Elizabeth Minshul, a lady of good family in Cheshire. In what year he began the composition of his '*Paradise Lost*,' is not certainly known: some have supposed in 1658. There is better ground for fixing the period of its close. During the plague of 1665 he retired to Chalfont, and at that time Elwood the quaker read the poem in a finished state. The general interruption of business in London occasioned by the plague, and prolonged by the great fire in 1666, explain why the publication was delayed for nearly two years. The contract with the publisher is dated April 26, 1667, and in the course of that year the *Paradise Lost* was published. Originally it was printed in ten books: in the second, and subsequent editions, the seventh and tenth books were each divided into two. Milton received only five pounds in the first instance on the publication of the book. His farther profits were regulated by the sale of the three first editions. Each was to consist of fifteen hundred copies, and on the second and third respectively reaching a sale of thirteen hundred, he was to receive a farther sum of five pounds for each; making a total of fifteen pounds. The receipt for the second sum of five pounds is dated April 26, 1669.

In 1670 Milton published his *History of Britain*, from the fabulous period to the Norman conquest. And in the same year he published in one volume *Paradise Regained* and *Samson Agonistes*. The *Paradise Regained*, it has been currently asserted that Milton preferred to *Paradise Lost*. This is not true; but he may have been justly offended by the false principles on which some of his friends maintained a reasonable opinion. The *Paradise Regained* is inferior by the necessity of its subject and design. In the *Paradise Lost* Milton had a field properly adapted to a poet's purposes: a few hints in Scripture were expanded. Nothing was altered, nothing absolutely added: but that, which was told in the Scriptures in sum, or in its last results, was developed into its whole succession of parts. Thus, for instance, "There was war in Heaven," furnished the matter

for a whole book. Now for the latter poem, which part of our Saviour's life was it best to select as that in which Paradise was Regained? He might have taken the Crucifixion, and here he had a much wider field than in the Temptation; but then he was subject to this dilemma. If he modified, or in any way altered, the full details of the four Evangelists, he shocked the religious sense of all Christians; yet, the purposes of a poet would often require that he should so modify them. With a fine sense of this difficulty, he chose the narrow basis of the Temptation in the Wilderness, because there the whole had been wrapt up in Scripture in a few brief abstractions. Thus, "He showed him all the kingdoms of the earth," is expanded, without offence to the nicest religious scruple, into that matchless succession of pictures, which bring before us the learned glories of Athens, Rome in her civil grandeur, and the barbaric splendour of Parthia. The actors being only two, the action of *Paradise Regained* is unavoidably limited. But in respect of composition, it is perhaps more elaborately finished than *Paradise Lost*.

In 1672 he published in Latin, a new scheme of Logic, on the method of Ramus, in which Dr. Johnson suspects him to have meditated the very eccentric crime of rebellion against the universities. Be that as it may, this little book is in one view not without interest: all scholastic systems of logic confound logic and metaphysics; and some of Milton's metaphysical doctrines, as the present Bishop of Winchester has noticed, have a reference to the doctrines brought forward in his posthumous *Theology*. The history of the last-named work is remarkable. That such a treatise had existed, was well known, but it had disappeared, and was supposed to be irrecoverably lost. But in the year 1823, a Latin manuscript was discovered in the State-Paper Office, under circumstances which left little doubt of its being the identical work which Milton was known to have composed; and this belief was corroborated by internal evidence. By the King's command, it was edited by Mr. Sumner, the present Bishop of Winchester, and separately published in a translation. The title is '*De Doctrina Christiana, libri duo posthumi*'—A *Treatise on Christian Doctrine*, compiled from the Holy Scriptures alone. In elegance of style, and sublimity of occasional passages, it is decidedly inferior to other of his prose works. As a system of theology, probably no denomination of Christians would be inclined to bestow other than a very sparing praise upon it. Still it is well worth the notice of those students, who are qualified to weigh the opinions, and profit by the errors of such a writer, as being composed with Milton's usual originality of

thought and inquiry, and as being remarkable for the boldness with which he follows up his arguments to their legitimate conclusion, however startling those conclusions may be.

What he published after the scheme of logic, is not important enough to merit a separate notice. His end was now approaching. In the summer of 1674 he was still cheerful, and in the possession of his intellectual faculties. But the vigour of his bodily constitution had been silently giving way, through a long course of years, to the ravages of gout. It was at length thoroughly undermined: and about the tenth of November, 1674, he died with tranquillity so profound, that his attendants were unable to determine the exact moment of his decease. He was buried, with unusual marks of honour, in the chancel of St. Giles' at Cripplegate.

The published lives of Milton are very numerous. Among the best and most copious are those prefixed to the editions of Milton's works by Bishop Newton, Todd, and Symmons. An article of considerable length, founded upon the latter, will be found in Rees's Cyclopædia. But the most remarkable is that written by Dr. Johnson in his 'Lives of the British Poets;' a production grievously disfigured by prejudice, yet well deserving the student's attentions for its intrinsic merits, as well as for the celebrity which it has attained.





THE  
NEW  
YORK  
LIBRARY  
OF  
THE  
CITY OF  
NEW YORK









THOSE who by cultivating the arts of peace have risen from obscurity to fame and wealth, seldom leave to the biographer such ample memorials of their private lives as he could wish to work upon. The details of a life spent in the laboratory or in the workshop rarely present much variety; or possess much interest, except when treated scientifically for the benefit of the scientific reader. Such is the case with James Watt: the history of his long and prosperous life is little more than the history of his scientific pursuits; and this must plead our excuse if it chance that the reader should here find less personal information about him than he may desire. Fortunately his character has been sketched before it was too late, by the masterly hand of one who knew him well. Most of the accounts of him already published are said, by those best qualified to judge, to be inaccurate. The same authority is pledged to the general correctness of the article Watt, in the supplement to the *Encyclopædia Britannica*, and from that article the facts of this short memoir are taken.

Both the grandfather and uncle of James Watt were men of some repute in the West of Scotland, as mathematical teachers and surveyors. His father was a merchant at Greenock, where Watt was born, June 19, 1736, and where he received the rudiments of his education. Our knowledge of the first twenty years of his life may be comprised in a few short sentences. At an early age he manifested a partiality for the practical part of mechanics, which he retained through life, taking pleasure in the manual exercise of his early trade, even when hundreds of hands were ready to do his bidding. In his eighteenth year he went to London, to obtain instruction in the profession of a mathematical instrument-maker; but he remained there little more than a year, being compelled to return home by the precariousness of his health.

In 1757, shortly after his return home, he was appointed instrument-

maker to the University of Glasgow, and accommodated with premises within the precincts of that learned body. Robert Simpson, Adam Smith, and Dr. Black, were then some of the professors; and from communication with such men, Watt could not fail to derive the most valuable mental discipline. With Dr. Black, and with John Robison, then a student, afterwards eminent as a mathematician and natural philosopher, he formed a friendship which was continued through life. In 1763 he removed into the town of Glasgow, intending to practise as a civil engineer, and in the following year was married to his cousin Miss Miller.

In the winter of 1763-4, his mind was directed to the earnest prosecution of those inventions which have made his name celebrated over the world, by having to repair a working model of a steam-engine on Newcomen's construction, for the lectures of the Professor of Natural Philosophy. In treating this subject, we must presume that the reader possesses a competent acquaintance with the history and construction of the steam-engine. Those who do not possess the requisite knowledge, will find it briefly and clearly stated in a short treatise written by Mr. Farey, and in many works of easy access. Newcomen's engine, at the time of which we speak, was of the last and most approved construction. The moving power was the weight of the air pressing on the upper side of a piston working in a cylinder; steam being employed at the termination of each downward stroke to raise the piston with its load of air up again, and then to form a vacuum by its condensation when cooled by a jet of cold water, which was thrown into the cylinder when the admission of steam was stopped. Upon repairing the model, Watt was struck by the incapability of the boiler to produce a sufficient supply of steam, though it was larger in proportion to the cylinder than was usual in working engines. This arose from the nature of the cylinder, which being made of brass, a better conductor of heat than cast-iron, and presenting, in consequence of its small size, a much larger surface in proportion to its solid content than the cylinders of working engines, necessarily cooled faster between the strokes, and therefore at every fresh admission consumed a greater proportionate quantity of steam. But being made aware of a much greater consumption of steam than he had imagined, he was not satisfied without a thorough inquiry into the cause. With this view he made experiments upon the merits of boilers of different constructions; on the effect of substituting a less perfect conductor, as wood, for the material of the cylinder; on the quantity of coal required to evaporate a given quantity of water; on the degree of

expansion of water in the shape of steam : and he constructed a boiler which showed the quantity of water evaporated in a given time, and thus enabled him to calculate the quantity of steam consumed at each stroke of the engine. This proved to be several times the content of the cylinder. He soon discovered that, whatever the size and construction of the cylinder, an admission of hot steam into it must necessarily be attended with very great waste, if, in condensing the steam previously admitted, that vessel had been cooled down sufficiently to produce a vacuum at all approaching to a perfect one. If, on the other hand, to prevent this waste, he cooled it less thoroughly, a considerable quantity of steam remained uncondensed within, and by its resistance weakened the power of the descending stroke. These considerations pointed out a vital defect in Newcomen's construction : involving either a loss of steam, and consequent waste of fuel, or a loss of power from the piston's descending at every stroke through a very imperfect vacuum.

It soon occurred to Watt, that if the condensation were performed in a separate vessel, one great evil, the cooling of the cylinder, and the consequent waste of steam, would be avoided. The idea once started, he soon verified it by experiment. By means of an arrangement of cocks, a communication was opened between the cylinder, and a distinct vessel exhausted of its air, at the moment when the former was filled with steam. The vapour of course rushed to fill up the vacuum, and was there condensed by the application of external cold, or by a jet of water : so that fresh steam being continually drawn off from the cylinder to supply the vacuum continually created, the density of that which remained might be reduced within any assignable limits. This was the great and fundamental improvement.

Still, however, there was a radical defect in the atmospheric engine, inasmuch as the air being admitted into the cylinder at every stroke, a great deal of heat was abstracted, and a proportionate quantity of steam wasted. To remedy this, Watt excluded the air from the cylinder altogether ; and recurred to the original plan of making steam the moving power of the engine, not a mere agent to produce a vacuum. In removing the difficulties of construction which beset this new plan, he displayed great ingenuity and powers of resource. On the old plan, if the cylinder was not bored quite true, or the piston not accurately fitted, a little water poured upon the top rendered it perfectly air-tight, and the leakage into the cylinder was of little consequence, so long as the injection water was thrown into that vessel. But on the new plan, no water could possibly be admitted within the

cylinder; and it was necessary, not merely that the piston should be air-tight, but that it should work through an air-tight collar, that no portion of the steam admitted above it might escape. This he accomplished by packing the piston and the stuffing-box, as it is called, through which the piston-rod works, with hemp. A farther improvement consisted in equalizing the motion of the engine by admitting the steam alternately above and below the piston, by which the power is doubled in the same space, and with the same strength of material. The vacuum of the condenser was perfected by adding a powerful pump, which at once drew off the condensed, and injection water, and with it any portion of air which might find admission; as this would interfere with the action of the engine, if allowed to accumulate. His last great change was to cut off the communication between the cylinder and the boiler, when a portion only, as one-third or one-half, of the stroke was performed; leaving it to the expansive power of the steam to complete it. By this, economy of steam was obtained; together with the power of varying the effort of the engine according to the work which it has to do, by admitting the steam through a greater or smaller portion of the stroke.

These are the chief improvements which Watt effected at different periods of his life. Of the patient ingenuity by which they were rendered complete, and the many beautiful contrivances by which he gave to senseless matter an almost instinctive power of self-adjustment, with precision of action more than belongs to any animated being, we cannot speak; nor would it be easy to render description intelligible without the help of diagrams. His first patent bears date June 5, 1769, so that some time elapsed between the invention and publication of his improvements. The delay arose partly from his own want of funds, and the difficulty of finding a person possessed of capital, who could appreciate the merit of his invention; partly from his own increasing occupation as a civil engineer. In that capacity he soon acquired reputation, and was employed in various works of importance. In 1767 he made a survey for a canal, projected, but not executed, between the Clyde and Forth. He also made the original survey for the Crinan Canal, since carried into effect by Mr. Rennie; and was employed extensively in forming harbours, deepening rivers, constructing bridges, and all the most important labours of his profession. The last and greatest work of this kind on which he was employed, was a survey for a canal between Fort William and Inverness, where the Caledonian Canal now runs.

At last Dr. Roebuck, the establisher of the Carron iron-works,



became Watt's partner in the patent, upon condition that he should supply the necessary funds for bringing out the invention, and receive in return two-thirds of the profit. That gentleman, however, was unable to fulfil his share of the contract, and in 1774 resigned his interest to Mr. Boulton, the proprietor of the Soho works, near Birmingham. Watt then determined to remove his residence to England; a step to which he probably was rendered more favourable by the death of his wife in 1773. In 1775, Parliament, in consideration of the national importance of Mr. Watt's inventions, and the difficulty and expense of introducing them to public notice, prolonged the duration of his patent for twenty-five years.

The partners now erected engines for pumping water upon a large scale, and it was found by comparative trials that the saving of fuel amounted to three-fourths of the whole quantity consumed by the engines formerly in use. This fact once established, the new machine was soon introduced into the deep mines of Cornwall, where, of all places, its merits could best be tried. The patentees were paid by receiving one-third of the savings of fuel. From the time that the new value of their invention was fully proved, Messrs. Boulton and Watt had to maintain a harassing contest with numerous invaders of their patent rights; and it was not until near the expiration of the patent in 1800, that the question was definitively settled in their favour. These attacks, however, did not prevent Watt from realizing an ample fortune, the well-earned reward of his industry and ability, with which he established himself at Heathfield, in the county of Stafford.

At one period Watt devoted much attention to the construction of a rotary engine, in which the power of the steam should be applied directly to produce circular motion. Like all who have yet attempted to solve this problem, he failed to obtain a satisfactory result; and turned his attention in consequence to discover the best means of converting reciprocal into rotary motion. For this purpose he originally intended to use the crank; but having been forestalled by a neighbouring manufacturer, who took out a patent for it, having obtained his knowledge, as it is said, surreptitiously from one of Watt's workmen, he invented the combination called the sun and planet wheels. Afterwards he recurred to the crank, without a shadow of opposition from the patentee. He was also the author of that elegant contrivance, the parallel motion, which superseded the old-fashioned beam and chain, and rendered possible the introduction of the double engine, in which an upward, as well as a downward force is applied.

His attention, however, was not confined to the subject of steam. He invented a copying machine, for which he took out a patent, in 1780. In the winter of 1784-5, he erected an apparatus, the first of its kind, for warming his apartments by steam. He also introduced into England the method of bleaching with oxymuriatic acid, or chlorine, invented and communicated to him for publication by his friend Berthollet. Towards the conclusion of life, he constructed a machine for making fac-similes of busts and other carved work; and also busied himself in forming a composition for casts, possessing much of the transparency and hardness of marble.

With chemistry Watt was well acquainted. In 1782 he published a paper in the *Philosophical Transactions*, entitled, 'Thoughts on the constituent parts of Water, and of Dephlogisticated Air.' His only other literary undertaking was the revision of Professor Robison's articles on Steam and Steam Engines, in the *Encyclopædia Britannica*, to which he added notes containing an account of his own experiments on steam, and a history of his improvements in the engine.

About the year 1775 he married his second wife, Miss Macgregor. Though his health had been delicate through life, yet he reached the advanced age of eighty-four. He died at his house at Heathfield, August 25, 1819. Chantrey made a bust of him some years before his death; from which the same distinguished artist has since executed two marble statues, one for his tomb, the other for the Hunterian Museum at Glasgow; and a third in bronze, also for Glasgow, which has recently been erected there. It represents Watt seated in deep thought, a pair of compasses in his hand, and a scroll, on which is the draught of a steam-engine, open on his knee.

We cannot better close this account, than with a short extract from the sketch of his character, to which we have alluded in a former page. After speaking of the lasting celebrity which Watt has acquired by his mechanical inventions, the author continues, that "to those to whom he more immediately belonged, who lived in his society and enjoyed his conversation, this is not, perhaps, the character in which he will be most frequently recalled,—most deeply lamented,—or even most highly admired. Independently of his great attainments in mechanics, Mr. Watt was an extraordinary and in many respects a wonderful man. Perhaps no individual in his age possessed so much and such varied and exact information, had read so much, or remembered what he had read so accurately and well. He had infinite quickness of apprehension, a prodigious memory, and a certain rectifying and methodising power of understanding, which extracted

something precious out of all that was presented to it. His stores of miscellaneous knowledge were immense, and yet less astonishing than the command he had at all times over them. It seemed as if every subject that was casually started in conversation with him, had been that which he had been last occupied in studying and exhausting; such was the copiousness, the precision, and the admirable clearness of the information which he poured out upon it without effort or hesitation. Nor was this promptitude and compass of knowledge confined, in any degree, to the studies connected with his ordinary pursuits. That he should have been minutely and extensively skilled in chemistry and the arts, and in most of the branches of physical science, might, perhaps, have been conjectured; but it could not have been inferred from his usual occupations, and probably is not generally known, that he was curiously learned in many branches of antiquity, metaphysics, medicine, and etymology; and perfectly at home in all the details of architecture, music, and law. He was well acquainted, too, with most of the modern languages, and familiar with their most recent literature. Nor was it at all extraordinary to hear the great mechanician and engineer detailing and expounding, for hours together, the metaphysical theories of the German logicians, or criticising the measures or the matter of the German poetry. \* \* \*

“ It is needless to say, that with those vast resources, his conversation was at all times rich and instructive in no ordinary degree. But it was, if possible, still more pleasing than wise, and had all the charms of familiarity, with all the substantial treasures of knowledge. No man could be more social in his spirit, less assuming or fastidious in his manners, or more kind and indulgent towards all who approached him. \* \* \* His talk, too, though overflowing with information, had no resemblance to lecturing, or solemn discoursing; but, on the contrary, was full of colloquial spirit and pleasantry. He had a certain quiet and grave humour, which ran through most of his conversation, and a vein of temperate jocularitv, which gave infinite zest and effect to the condensed and inexhaustible information which formed its main staple and characteristic. There was a little air of affected testiness, and a tone of pretended rebuke and contradiction, which he used towards his younger friends, that was always felt by them as an endearing mark of his kindness and familiarity, and prized accordingly, far beyond all the solemn compliments that ever proceeded from the lips of authority. His voice was deep and powerful; though he commonly spoke in a low and somewhat monotonous tone, which harmonized admirably with the weight and brevity of his observations, and set off to the greatest

advantage the pleasant anecdotes which he delivered with the same grave tone, and the same calm smile playing soberly on his lips. There was nothing of effort, indeed, or of impatience, any more than of pride or levity, in his demeanour; and there was a finer expression of reposing strength, and mild self-possession in his manner, than we ever recollect to have met with in any other person. He had in his character the utmost abhorrence for all sorts of forwardness, parade, and pretension; and indeed never failed to put all such impostors out of countenance, by the manly plainness and honest intrepidity of his language and deportment.

“He was twice married, but has left no issue but one son, long associated with him in his business and studies, and two grandchildren by a daughter who predeceased him. He was fellow of the Royal Societies both of London and Edinburgh, and one of the few Englishmen who were elected members of the National Institute of France. All men of learning and of science were his cordial friends; and such was the influence of his mild character, and perfect fairness and liberality, even upon the pretender to these accomplishments, that he lived to disarm even envy itself, and died, we verily believe, without a single enemy.”



THE NEW  
PUBLIC LIBRARY

ASTOR, L.  
TILDEN, F.



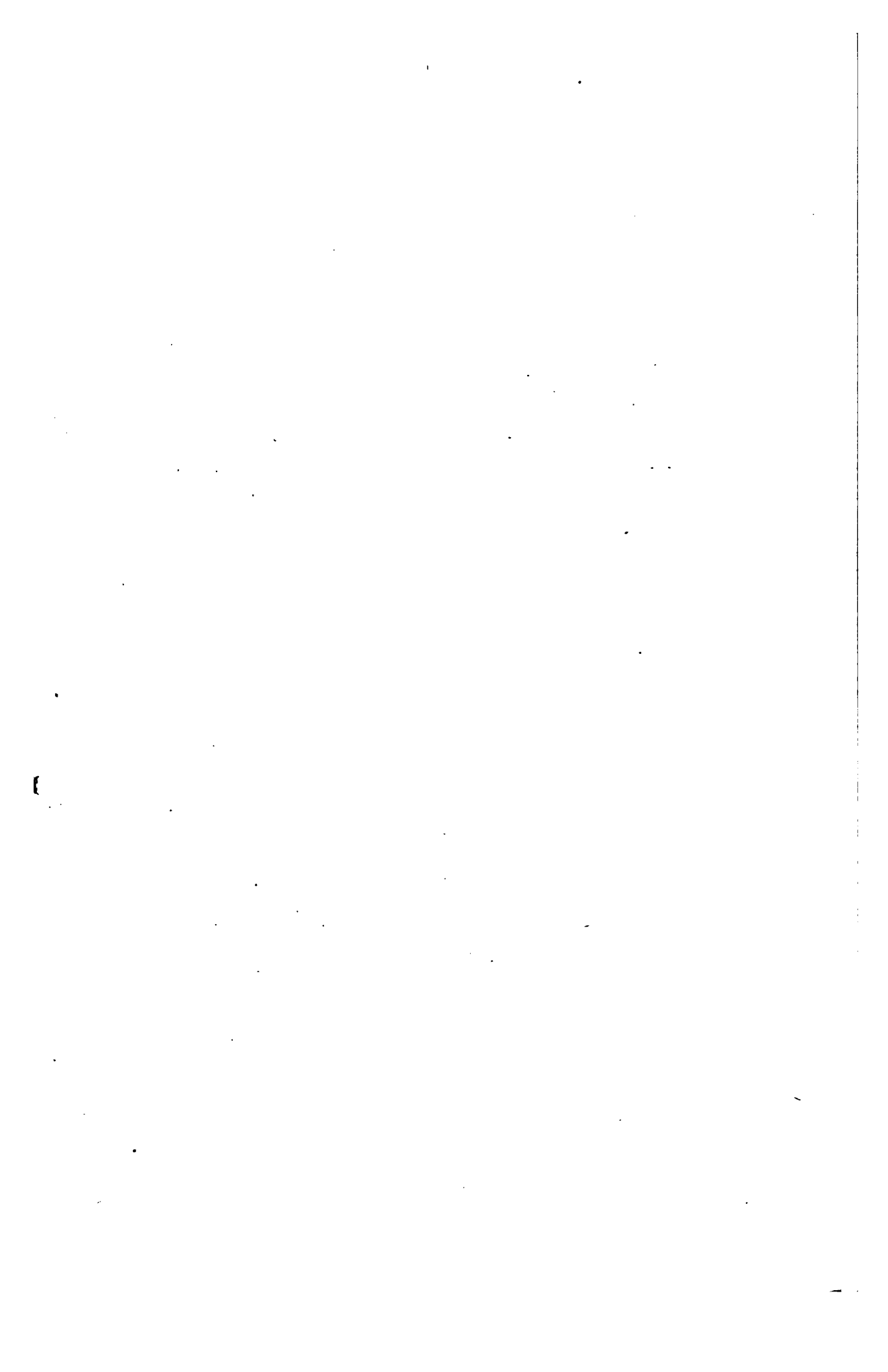
Engraved by W. Hill

MARSHAL TURENNE.

*From the original Picture by Le Sueur;  
in the collection of the House of Burgundy.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge.

London, Published by Charles Knight, Pall Mall East.









HENRI de la Tour d'Auvergne, Vicomte de Turenne, born September 16th, 1611, was the second son of the Duc de Bouillon, prince of Sedan, and of Elizabeth of Nassau, daughter of the celebrated William of Orange, to whose courage and talents the Netherlands mainly owed their deliverance from Spain. Both parents being zealous Calvinists, Turenne was of course brought up in the same faith. Soon after his father's death, the Duchess sent him, when he was not yet thirteen years old, into the Low Countries, to learn the art of war under his uncle, Maurice of Nassau, who commanded the troops of Holland in the protracted struggle between that country and Spain. Maurice held that there was no royal road to military skill, and placed his young relation in the ranks, as a volunteer, where for some time he served, enduring all hardships to which the common soldiers were exposed. In his second campaign he was promoted to the command of a company, which he retained for four years, distinguished by the admirable discipline of his men, by unceasing attention to the due performance of his own duty, and by his eagerness to witness, and become thoroughly acquainted with, every branch of service. In the year 1630, family circumstances rendered it expedient that he should return to France, where the court received him with distinction, and invested him with the command of a regiment.

Four years elapsed before Turenne had an opportunity of distinguishing himself in the service of his native country. His first laurels were reaped in 1634, at the siege of the strong fortress of La Motte, in Lorraine, where he headed the assault, and, by his skill and bravery, mainly contributed to its success. For this exploit he was raised at the early age of twenty-three to the rank of Marechal de Camp, the

second grade of military rank in France. In the following year, the breaking out of war between France and Austria opened a wider field of action. Turenne held a subordinate command in the army, which, under the Cardinal de la Valette, marched into Germany to support the Swedes, commanded by the Duke of Weimar. At first fortune smiled on the allies; but, ere long, scarcity of provisions compelled them to a disastrous retreat over a ruined country, in the face of the enemy. On this occasion the young soldier's ability and disinterestedness were equally conspicuous. He sold his plate and equipage for the use of the army; threw away his baggage to load the waggons with those stragglers who must otherwise have been abandoned; and marched on foot, while he gave up his own horse to the relief of one who had fallen, exhausted by hunger and fatigue. These are the acts which win the attachment of soldiers, and Turenne was idolized by his.

Our limits will not allow of the relation of those campaigns in which the subject of this memoir filled a subordinate part. In 1637-8 he again served under La Valette, in Flanders and Germany, after which he was made Lieutenant-General, a rank not previously existing in France. The three following years he was employed in Italy and Savoy, and in 1642 made a campaign in Roussillon, under the eye of Louis XIII. In the spring of 1643, the King died; and in the autumn of the same year, Turenne received from the Queen Mother and Regent, Anne of Austria, a Marshal's baton, the appropriate reward of his long and brilliant services. Four years a captain, four a colonel, three Marechal de Camp, five lieutenant-general, he had served in all stations from the ranks upwards, and distinguished himself in them not only by military talent, but by strict honour and trustworthiness, rare virtues in those turbulent times when men were familiar with civil war, and the great nobility were too powerful to be peaceful subjects.

Soon after his promotion, he was sent to Germany, to collect and reorganise the French army, which had been roughly handled at Duttlingen. It wanted rest, men, and money, and he settled it in good quarters, raised recruits, and pledged his own credit for the necessary sums. The effects of his exertions were soon seen. He arrived in Alsace, December, 1643, and in the following May was at the head of 10,000 men, well armed and equipped, with whom he felt strong enough to attack the Imperial army, and raise the siege of Fribourg. At that moment the glory which he hoped and was entitled to obtain, as the reward of five months' labour, was snatched from him by the arrival of the celebrated Prince de Condé, at that time Duc d'Enghien, to assume the command. The vexation which Turenne must have felt

was increased by the difference of age, for the Prince was ten years his junior, and of personal character. Condè was ardent and impetuous, and flushed by his brilliant victory at Rocroi the year before; Turenne cool, calculating, and cautious, unwearied in preparing a certainty of success before-hand, yet prompt in striking when the decisive moment was come. The difference of their characters was exemplified upon this occasion. Merci, the Austrian commander, had taken up a strong position, which Turenne said could not be forced; but at the same time pointed out the means of turning it. Condè differed from him, and the second in command was obliged to submit. On two successive days two bloody and unsuccessful assaults were made: on the third Turenne's advice was taken, and on the first demonstration of this change of plan Merci retreated. In the following year, ill supplied with every thing, and forced to separate his troops widely to obtain subsistence, he was attacked at Mariendal, and worsted by his old antagonist Merci. This, his first defeat, he felt severely: still he retained his position, and was again ready to meet the enemy, when he received positive orders from Mazarine to undertake nothing before the arrival of Condè. Zealous for his country and careless of personal slights, he marched without complaint under the command of his rival: and his magnanimity was rewarded at the battle of Nordlingen, in 1645, where the centre and right wing having failed in their attack, Turenne with the left wing broke the enemy's right, and falling on his centre in flank, threw it into utter confusion. For this service he received the most cordial and ample acknowledgments from Condè, both on the field, and in his despatches to the Queen Regent. Soon after, Condè, who was wounded in the battle, resigned his command into the hands of Turenne. The following campaigns of 1646-7-8 exhibited a series of successes, by means of which he drove the Duke of Bavaria from his dominions, and reduced the Emperor to seek for peace. This was concluded at Munster in 1648, and to Turenne's exertions the termination of the thirty years' war is mainly to be ascribed.

The repose of France was soon broken by civil war. Mazarin's administration, oppressive in all respects, but especially in fiscal matters, had produced no small discontent throughout the country, and especially in Paris; where the parliament openly espoused the cause of the people against the minister, and were joined by several of the highest nobility, urged by various motives of private interest or personal pique. Among these were the Prince of Conti, the Duc de Longueville, and the Duc de Bouillon. Mazarin, in alarm, endeavoured to enlist the ambition of Turenne in his favour, by offering the

government of Alsace, and the hand of his own niece, as the price of his adherence to the court. The Viscount, pressed by both parties, avoided to declare his adhesion to either: but he unequivocally expressed his disapprobation of the Cardinal's proceedings, and, being superseded in his command, retired peaceably to Holland. There he remained till the convention of Ruel effected a hollow and insincere reconciliation between the court and one of the jarring parties of which the Fronde was composed. That reconciliation was soon broken by the sudden arrest of Condè, Conti, and the Duc de Longueville. Turenne then threw himself into the arms of the Fronde; urged partly by indignation at this act of violence, partly by a sympathy with the interests of his brother, the Duc de Bouillon; but more, it is said, by a devoted attachment to the Duchesse de Longueville, who turned the great soldier to her purposes, and laughed at his passion. He sold his plate; the Duchess sold her jewels: they concluded an alliance with Spain, and the Viscount was soon at the head of an army. But the heterogeneous mass of Frenchmen, Spaniards, and Germans, melted away during the first campaign; and Turenne, at the head of eight thousand men, found himself obliged to encounter the royal army, twenty thousand strong. In the battle which ensued, he distinguished his personal bravery in several desperate charges: but the disparity was too great; and this defeat of Rhetel was of serious consequence to the Fronde party. Convinced at last that his true interest lay rather on the side of the court, then managed by a woman and a priest, where he might be supreme in military matters, than in supporting the cause of an impetuous and self-willed leader, such as Condè, Turenne gladly listened to overtures of accommodation, and passed over to the support of the regency. His conduct in this war appears to be the most objectionable part of a long and, for that age, singularly honest life. The fault, however, seems to have been rather in espousing, than in abandoning, the cause of the Fronde. Many of that party were doubtless actuated by sincerely patriotic motives. Such, however, were not the motives of Turenne, nor of the nobility to whom he attached himself: and if, in returning to his allegiance, he followed the call of interest as decidedly as he had followed the call of passion in revolting, it was at least a recurrence to his former principle of loyalty, from which, in after-life, he never swerved.

The value of his services was soon made evident. Twice, at the head of very inferior troops, he checked Condè in the career of victory: and again compelled him to fight under the walls of Paris; where, in the celebrated battle of the Faubourg St. Antoine, the Prince and his

army narrowly escaped destruction. Finally, he re-established the court at Paris, and compelled Condè to quit the realm. These important events took place in one campaign of six months, in 1652.

In 1654 he again took the field against his former friend and commander, Condè, who had taken refuge in Spain, and now led a foreign army against his country. The most remarkable operation of the campaign was the raising the siege of Arras ; which the Spaniards had invested, according to the most approved fashion of the day, with a strong double line of circumvallation, within which the besieging army was supposed to be securely sheltered against the sallies of the garrison cooped up within, and the efforts of their friends from without. Turenne marched to the relief of the place. This could only be effected by forcing the enemy's entrenchments ; which were accordingly attacked, contrary to the opinion of his own officers, and carried at all points, despite the personal exertions of Condè. The Spaniards were forced to retreat. It is remarkable that Turenne, not long after, was himself defeated in precisely similar circumstances, under the walls of Valenciennes, round which he had drawn lines of circumvallation. Once more he found himself in the same position at Dunkirk. On this occasion he marched out of his lines to meet the enemy, rather than wait, and suffer them to choose their point of attack : and the celebrated battle of the Dunes or Sandhills ensued, in which he gained a brilliant victory over the best Spanish troops, with Condè at their head. This took place in 1657. Dunkirk and the greater part of Flanders fell into the hands of the French in consequence ; and these successes led to the treaty of the Pyrenees, which terminated the war in 1658.

Turenne's signal services were appreciated and rewarded by the entire confidence both of the regency, and of Louis himself, after he attained his majority and took the reins of state into his own hands. At the King's marriage, in 1660, he was created Marshal-General of the French armies, with the significant words, " Il ne tient qu'à vous que ce soit davantage." The monarch is supposed to have meditated the revival of the high dignity of Constable of France, which could not be held by a Protestant. If this were so, it was a tempting bribe ; but it failed. Covetousness was no part of Turenne's character ; and for ambition, his calm and strong mind could not but see that a dignity won by such unworthy means would not elevate him in men's eyes. We would willingly attribute his conduct to a higher principle ; but there is reason to believe that henceforth he rather sought to be converted from the strict tenets of Calvinism in which he had been

brought up. It is at least certain, from his correspondence, that about this time he applied himself to theological studies, with which an imperfect education, and a life spent in camps, had little familiarized him; and that in the year 1668 he solemnly renounced the Protestant church. However, he asked and received nothing for himself, and was refused one trifling favour which he requested for his nephew: and perhaps the most fair and probable explanation of his conversion is, that his profession of Calvinism had been habitual and nominal, not founded upon inquiry and conviction; and that in becoming a convert to Catholicism, he had little to give up, while his mind was strongly biassed in favour of the fashionable and established creed.

When war broke out afresh between France and Spain, in 1667, Louis XIV. made his first campaign under Turenne's guidance, and gained possession of nearly the whole of Flanders. In 1672, when Louis resolved to undertake in person the conquest of Holland, he again placed the command, under himself, in Turenne's hands, and disgraced several marshals who refused to receive orders from the Viscount, considering themselves his equals in military rank. How Le Grand Monarque forced the passage of the Rhine when there was no army to oppose him, and conquered city after city, till he was stopped by inundations, under the walls of Amsterdam, has been said and sung by his flatterers; and need not be repeated here. But after the King had left the army, when the Princes of Germany came to the assistance of Holland, and her affairs took a more favourable turn under the able guidance of the Prince of Orange, a wider field was offered for the display of Turenne's talents. In the campaign of 1673 he drove the Elector of Brandenburg, who had come to the assistance of the Dutch, back to Berlin, and compelled him to negotiate for peace. In the same year he was opposed, for the first time, to the Imperial General Montecuculi, celebrated for his military writings, as well as for his exploits in the field. The meeting of these two great generals produced no decisive results.

Turenne returned to Paris in the winter, and was received with the most flattering marks of favour. On the approach of spring, he was sent back to take command of the French army in Alsace, which, amounting to no more than ten thousand men, was pressed by a powerful confederation of the troops of the empire, and those of Brandenburg, once again in the field. Turenne set himself to beat the allies in detail, before they could form a junction. He passed the Rhine, marched forty French leagues in four days, and came up with the Imperialists, under the Duke of Lorraine, at Sintzheim. They occupied

a strong position, their wings resting on mountains; their centre protected by a river and a fortified town. Turenne hesitated: it seemed rash to attack; but a victory was needful before the combination of the two armies should render their force irresistible, and he commanded the best troops of France. The event justified his confidence. Every post was carried sword in hand. The Marshal had his horse killed under him, and was slightly wounded. To the officers, who crowded round him with congratulations, he replied, with one of those short and happy speeches which tell upon an army more than the most laboured harangues, "With troops like you, gentlemen, a man ought to attack boldly, for he is sure to conquer." The beaten army fell back behind the Neckar, where they effected a junction with the troops of Brandenburg: but they dared attempt nothing further, and left the Palatinate in the quiet possession of Turenne. Under his eye, and, as it appears from his own letters, at his express recommendation, as a matter of policy, that wretched country was laid waste to a deplorable extent. This transaction went far beyond the ordinary license of war, and excited general indignation even in that unscrupulous age. It will ever be remembered as a foul stain upon the character of the general who executed, and of the king and minister who ordered or consented to it.

Having carried fire and sword through that part of the Palatinate which lay upon the right or German bank of the Rhine, he crossed that river. But the Imperial troops, reinforced by the Saxons and Hessians to the amount of sixty thousand men, pressed him hard: and it seemed impossible to keep the field against so great a disparity of force; his own troops not amounting to more than twenty thousand. He retreated into Lorraine, abandoning the fertile plains of Alsace to the enemy, led his army behind the Vosges mountains, and crossing them by unfrequented routes, surprised the enemy at Colmar, beat him at Mulhausen and Turkheim, and forced him to recross the Rhine. This is esteemed the most brilliant of Turenne's campaigns, and it was conceived and conducted with the greater boldness, being in opposition to the orders of Louvois. "I know," he wrote to that minister, in remonstrating, and indeed refusing to follow his directions, "I know the strength of the Imperialists, their generals, and the country in which we are. I take all upon myself, and charge myself with whatever may occur."

Returning to Paris at the end of the campaign, his journey through France resembled a triumphal progress; such was the popular enthusiasm in his favour. Not less flattering was his reception by the King,

whose undeviating regard and confidence, undimmed by jealousy or envy, is creditable alike to the monarch and to his faithful subject. At this time Turenne, it is said, had serious thoughts of retiring to a convent, and was induced only by the earnest remonstrances of the King, and his representations of the critical state of France, to resume his command. Returning to the Upper Rhine, he was again opposed to Montecuculi. For two months the resources and well-matched skill of the rival captains were displayed in a series of marches and counter-marches, in which every movement was so well foreseen and guarded against, that no opportunity occurred for coming to action with advantage to either side. At last the art of Turenne appeared to prevail; when, not many minutes after he had expressed the full belief that victory was in his grasp, a cannon-ball struck him while engaged in reconnoitring the enemy's position, previous to giving battle, and he fell dead from his horse, July 27th, 1675. The same shot carried off the arm of St. Hilaire, commander-in-chief of the artillery. "Weep not for me," said the brave soldier to his son, "it is for that great man that we ought to weep."

His subordinates possessed neither the talents requisite to follow up his plans, nor the confidence of the troops, who perceived their hesitation, and were eager to avenge the death of their beloved general. "Loose the piebald," so they named Turenne's horse, was the cry; "he will lead us on." But those on whom the command devolved thought of nothing less than of attacking the enemy; and after holding a hurried council of war, retreated in all haste across the Rhine.

The Swabian peasants let the spot where he fell lie fallow for many years, and carefully preserved a tree under which he had been sitting just before. Strange that the people who had suffered so much at his hands, should regard his memory with such respect.

The character of Turenne was more remarkable for solidity than for brilliancy. Many generals may have been better qualified to complete a campaign by one decisive blow; few probably have laid the scheme of a campaign with more judgment, or shown more skill and patience in carrying their plans into effect. And it is remarkable that, contrary to general experience, he became much more enterprising in advanced years than he had been in youth. Of that impetuous spirit, which sometimes carries men to success where caution would have hesitated and failed, he possessed little. In his earlier years he seldom ventured to give battle, except where victory was nearly certain: but a course of victory inspired confidence, and trained by long practice to distinguish the difficult from the impossible, he adopted in his later campaigns



bolder style of tactics than had seemed congenial to his original temper. In this respect he offered a remarkable contrast to his rival in fame, Condè, who, celebrated in early life for the headlong valour, even to rashness, of his enterprises, became in old age prudent almost to timidity. Equally calm in success or in defeat, Turenne was always ready to prosecute the one, or to repair the other. And he carried the same temper into private life, where he was distinguished for the dignity with which he avoided quarrels, under circumstances in which lesser men would have found it hard to do so, without incurring the reproach of cowardice. Nor must we pass over his thorough honesty and disinterestedness in pecuniary matters ; a quality more rare in a great man then than it is now.

In 1653 he married the daughter of the Duc de la Force. She died in 1666, without leaving children.

Turenne composed memoirs of his own life, which are published in the *Life of him* by the Chevalier Ramsay. There is also a collection of his *Military Maxims*, by Captain Williamson. In 1782 Grimoard published his '*Collection des Memoirs du Marechal de Turenne.*' Deschamps, an officer who served under him, wrote a full account of his two last campaigns ; and the history of his four last campaigns has been published under the name of Beaurain. We may also refer the reader for the history of these times to Voltaire, *Siècle de Louis XIV.*



French Cavalier of the seventeenth century.



THIS excellent and accomplished person was one of those who do honour to high birth and ample fortune, by employing them, not as the means of selfish gratification or personal aggrandisement, but in the furtherance of every useful pursuit, and every benevolent purpose. By the lover of science he is honoured as one of the first and most successful cultivators of experimental philosophy; to the Christian his memory is endeared, as that of one, who, in the most licentious period of English history, showed a rare example of religion and virtue in exalted station, and was an early and zealous promoter of the diffusion of the Scriptures in foreign lands.

Robert Boyle was the youngest son but one of a statesman eminent in the successive reigns of Elizabeth, and the first James and Charles; and well known in Ireland by the honourable title of the Great Earl of Cork. He has left an unfinished sketch of his own early life, in which he assumes the name of Philaretus, a lover of virtue; and speaks of his childhood as characterized by two things, a more than usual inclination to study, and a rigid observance of truth in all things. He was born in Ireland, January 25, 1626-7. In his ninth year he was sent, with his elder brother Francis, to Eton, where he spent between three and four years: in the early part of which, under the guidance of an able and judicious tutor, he made great progress both in the acquisition of knowledge, and in forming habits of accurate and diligent inquiry. But his studies were interrupted by a severe ague; and while recovering from that disorder he contracted a habit of desultory reading, which it afterwards cost him some pains to conquer by a laborious course of mathematical calculations. During his abode at Eton several remarkable escapes from imminent peril occurred to him, upon which, in after-life, he looked back with reverential gratitude, and with the full conviction that the direct hand of an overruling providence was to be traced in them.







Engraved by R. Needman

ROBERT BOYLE.

*From an original Picture;  
in the possession of Lord Dover.*

Under the Superintendance of the Society for the Diffusion of Useful Knowledge

*LONDON: Published by Charles Knight, Pall Mall East.*

ASTOR LENOX  
TILDEN FOUNDATION

Towards the close of 1637, as it should seem, his father, who had purchased the manor of Stalbridge, in Dorsetshire, took him home. In October, 1638, he was sent abroad, under the charge of a governor, with his brother Francis. They visited France, Switzerland, and Italy; and Philaretus's narrative of his travels is not without interest. The only incident which we shall mention as occurring during this period, is one which may be thought by many scarcely worthy of notice. Boyle himself used to speak of it as the most considerable accident of his whole life; and for its influence upon his life it ought not to be omitted. While staying at Geneva, he was waked in the night by a thunder-storm of remarkable violence. Taken unprepared and startled, it struck him that the day of judgment was at hand; "whereupon," to use his own words, "the consideration of his unpreparedness to welcome it, and the hideousness of being surprised by it in an unfit condition, made him resolve and vow, that if his fears that night were disappointed, all further additions to his life should be more religiously and watchfully employed." He has been spoken of as being a sceptic before this sudden conversion. This does not appear from his own account, farther than as any boy of fourteen may be so called, who has never taken the trouble fully to convince himself of those truths which he professes to believe. On the breaking out of the rebellion in 1642, the troubled state of England, and the death of the Earl of Cork, involved the brothers in considerable pecuniary difficulties. They returned to England in 1644, and Robert, after a short delay, took possession of the manor of Stalbridge, which, with a considerable property in Ireland, had been bequeathed to him by his father. By the interest of his brother and sister, Lord Broghill and Lady Ranelagh, who were on good terms with the ruling party, he obtained protections for his property, and for the next six years made Stalbridge his principal abode. This portion of his life was chiefly spent in the study of ethical and natural philosophy; and his name began already to be respected among the men of science of the day.

In 1652 he went to Ireland to look after his property, and spent the greater part of the next two years there. Returning to England in 1654, he settled at Oxford. That which especially directed him to this place, besides its being generally suited to the prosecution of all his literary and philosophical pursuits, was the presence of that knot of learned men, from whom the Royal Society took its rise. It consisted of a few only, but those eminent; Bishop Wilkins, Wallis, Ward, Wren, and others, who used to meet for the purpose of con-

ferring upon philosophical subjects, and mutually communicating and reasoning on their respective experiments and discoveries.

At the restoration, Boyle was treated with great respect by the King; and was strongly pressed to enter the church by Lord Clarendon, who thought that his high birth, eminent learning, and exemplary character might be of material service to the revived establishment. After serious consideration he declined the proposal, upon two accounts, as he told Burnet; first, because he thought that while he performed no ecclesiastical duties, and received no pay, his testimony in favour of religion would carry more weight; secondly, because he felt no especial vocation to take holy orders, which he considered indispensable to the proper entering into that service.

From this time forwards, Boyle's life is not much more than the history of his works. It passed in an even current of tranquil happiness, and diligent employment, little broken, except by illness, from which he was a great sufferer. At an early age, he was attacked by the stone, and continued through life subject to paroxysms of that dreadful disease: and in 1670, he was afflicted with a severe paralytic complaint, from which he fortunately recovered without sustaining any mental injury. On the incorporation of the Royal Society in 1663, he was named as one of the council, in the charter; and as he had been one of the original members, so through his life he continued to publish his shorter treatises in their Transactions. In 1662 he was appointed by the King, Governor of the Corporation for propagating the Gospel in New England. The diffusion of Christianity was a favourite subject of exertion with him through life. For the sole purpose of exerting a more effectual influence in introducing it into India, he became a Director of the East India Company; and, at his own expense, caused the Gospels and Acts to be translated into Malay, and five hundred copies to be printed and sent abroad. He also caused a translation of the Bible into Irish to be made and published, at an expense of £700; and bore great part of the expense of a similar undertaking in the Welsh language. To other works of the same sort he was a liberal contributor: and as in speech and writing he was a zealous, yet temperate advocate of religion, so he showed his sincerity by a ready extension of his ample funds to all objects which tended to promote the religious welfare of his fellow-creatures.

In the year 1666 he took up his abode in London, where he continued for the remainder of his life. We have little more to state of his personal history. He was elected President of the Royal Society in 1680, but declined that well-earned honour, as having, in his own



words, "a great (and perhaps peculiar) tenderness in point of oaths." In the course of 1688 he began to feel his strength decline, and set himself seriously to complete those of his undertakings which he judged most important, and to arrange such of his papers as required to be prepared for publication. It gives us rather a curious notion of the scientific morality of the day, to learn that he had been a great sufferer by the stealing of his papers. Such at least was his own belief, hinted in a public advertisement, and expressed more fully in his private communications. His manuscript books disappeared in an incomprehensible way, insomuch that he resolved to write upon loose sheets of paper, "that the ignorance of the coherence might keep men from thinking them worth stealing." Notwithstanding he complains of numerous losses, and expresses a determination to secure the "remaining part of his writings, especially those that contain most matters of fact, by sending them maimed and unfinished, as they come to hand, to the press." A still more serious loss occurred to him through the carelessness of a servant, who broke a bottle of vitriol over a box of manuscripts prepared for publication, by which a large part of them were utterly ruined. To these misfortunes, the non-appearance of many promised works, and the imperfect state of others, is to be ascribed. During the years 1689-90, he gradually withdrew himself more and more from his other employments, and from the claims of society, to devote himself entirely to the preparation of his papers. He died, unmarried, December 31, 1691, aged sixty-five years, and was buried in the chancel of St. Martin's-in-the-fields.

To give merely the dates and titles of Boyle's several publications, would occupy several pages. They are collected in five volumes folio, by Dr. Birch, and amount in number to ninety-seven. The philosophical works have been abridged in three volumes quarto by Dr. Shaw, who has prefixed to his edition a character of the author, and of his works. From 1660 to the end of his life, every year brought fresh evidence of his close application to science, and the versatility of his talents, and the extent of his knowledge. His attention was directed to chemistry, mathematics, mechanics, medicine, anatomy; but more especially to the former, in its many branches: and though he is not altogether free from the reproach of credulity, and appears not to have entirely freed himself from the delusions of the alchemists, still he did more towards overthrowing their mischievous doctrines, and establishing his favourite science on a firm foundation, than any man; and his indefatigable diligence in inquiry, and unquestioned honesty of relation, entitle him to a very high place among the fathers of modern

chemistry. On this point we may quote the testimony of the celebrated Boerhaave, (Chemistry, vol. i. p. 55,) who says, that among the writers who have treated of Chemistry with a view to natural philosophy and medicine, we may reckon among the chief, the Hon. Robert Boyle. Redi also, in his '*Experimenta Naturalia*,' affirms that in experimental philosophy there never was any man so distinguished, and that perhaps there never will be his equal in discovering natural causes.

It is, however, as the father of pneumatic philosophy that his scientific fame is most securely based. To the invention of the air-pump he possesses no claim, an instrument of that sort having been exhibited in 1654 by Otto Guericke of Magdeburg : but his improvements, and his well-combined and ingenious experiments first made that instrument of value, and proved the elasticity of the air. These were given to the world in his first published, and perhaps his most important work, entitled, '*New Experiments upon the Spring of the Air*.'

A considerable portion of Boyle's works is occupied by religious treatises. Two of these, '*Seraphic Love*,' and a '*Free Discourse against Swearing*,' were written before he had reached the age of twenty ; though not published for many years after. He established by his will an annual lecture, "in proof of the Christian religion against notorious infidels." Bentley was the first preacher on this foundation.

Boyle's funeral sermon was preached by Bishop Burnet, who had been under some obligation to him for assistance in publishing his *History of the Reformation*. The sermon has been considered one of Burnet's best ; and it has this advantage, that funeral panegyric has seldom been more sincerely and honestly bestowed. We conclude by quoting one or two passages, which illustrate the beauty of Boyle's private character. "He had brought his mind to such a freedom that he was not apt to be imposed on ; and his modesty was such that he did not dictate to others ; but proposed his own sense with a due and decent distrust, and was ever very ready to hearken to what was suggested to him by others. When he differed from any, he expressed himself in so humble and obliging a way that he never treated things or persons with neglect, and I never heard that he offended any one person in his whole life by any part of his demeanour. For if at any time he saw cause to speak roundly to any, it was never in passion, or with any reproachful or indecent expressions. And as he was careful to give those who conversed with him no cause or colour for displeasure, he was yet more careful of those who were absent, never

to speak ill of any, in which he was the exactest man I ever knew. If the discourse turned to be hard on any, he was presently silent; and if the subject was too long dwelt on, he would at last interpose, and, between reproof and raillery, divert it.

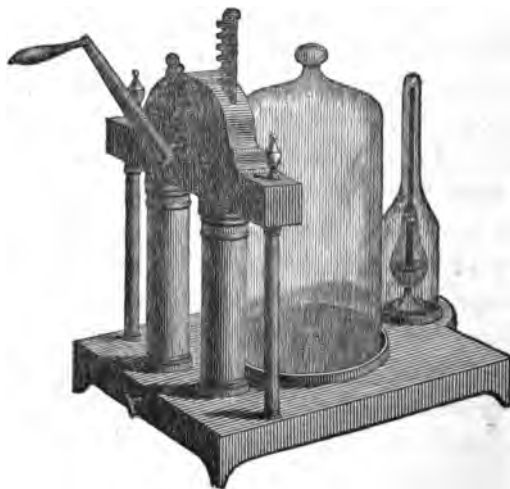
“ He was exactly civil, even to ceremony, and though he felt his easiness of access, and the desires of many, all strangers in particular, to be much with him, made great waste of his time; yet, as he was severe in that, not to be denied when he was at home, so he said he knew the heart of a stranger, and how much eased his own had been, while travelling, if admitted to the conversation of those he desired to see; therefore he thought his obligation to strangers was more than bare civility; it was a piece of religious charity in him.

“ He had, for almost forty years, laboured under such a feebleness of body, and such lowness of strength and spirits, that it will appear a surprising thing to imagine how it was possible for him to read, to meditate, to try experiments, and write as he did. He bore all his infirmities, and some sharp pains, with the decency and submission that became a Christian and philosopher. He had about him all that unaffected neglect of pomp in clothes, lodging, furniture, and equipage, which agreed with his grave and serious course of life. He was advised to a very ungrateful simplicity of diet, which, by all appearance, was that which preserved him so long beyond all men's expectation. This he observed so strictly, that in the course of above thirty years he neither ate nor drank to gratify the varieties of appetite, but merely to support nature; and was so regular in it, that he never once transgressed the rule, measure and kind that were prescribed him. \* \* \*

“ His knowledge was of so vast an extent, that were it not for the variety of vouchers in their several sort, I should be afraid to say all I know. He carried the study of Hebrew very far into the Rabbinical writings and the other Oriental languages. He had read so much out of the Fathers, that he had formed out of it a clear judgment of all the eminent ones. He had read a vast deal on the Scriptures, and had gone very nicely through the whole controversies on religion, and was a true master of the whole body of divinity. He read the whole compass of the mathematical sciences; and though he did not set himself to spring any new game, yet he knew even the abstrusest parts of geometry. Geography, in the several parts of it that related to navigation or travelling, history, and books of travels, were his diversions. He went very nicely through all the parts of physic; only the tenderness of his nature made him less able to endure the exactness of anatomical dissections, especially of living animals, though he

knew them to be most instructive. But for the history of nature, ancient or modern, of the productions of all countries, of the virtues and improvements of plants, of ores and minerals, and all the varieties that are in them in different climates, he was by much, by very much, the readiest and perfectest I ever knew, in the greatest compass, and with the truest exactness. This put him in the way of making that vast variety of experiments, beyond any man, as far as we know, that ever lived. And in these, as he made a great progress in new discoveries, so he used so nice a strictness, and delivered them with so scrupulous a truth, that all who have examined them, may find how safely the world may depend upon them. But his peculiar and favourite study was chemistry, in which he engaged with none of those ravenous and ambitious designs that draw many into them. His design was only to find out Nature, to see into what principles things might be resolved, and of what they were compounded, and to prepare good medicaments for the bodies of men. He spent neither his time nor his fortune upon the vain pursuits of high promises and pretensions. He always kept himself within the compass that his estate might well bear. And as he made chemistry much the better for his dealing with it, so he never made himself either the worse, or the poorer for it."

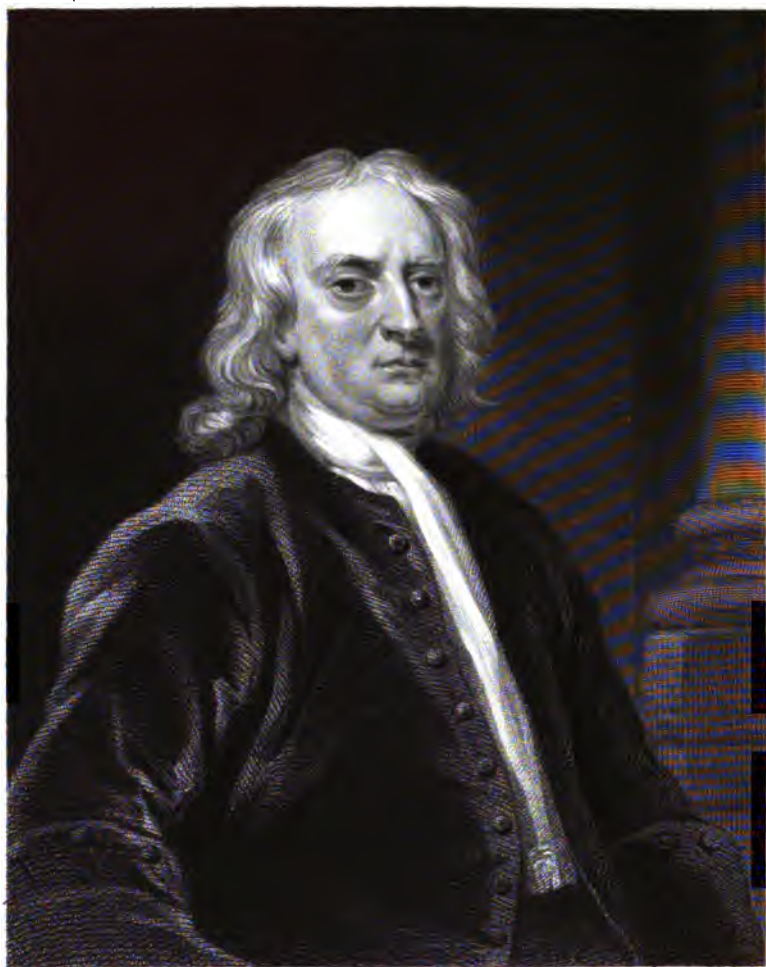
It would be easy to multiply testimonies of the high reputation in which Boyle was held : indeed the reader will find numerous instances collected in the article Boyle, in Dr. Kippis's *Biographia Britannica*, the perusal of which will amply gratify the reader's curiosity. Still more detailed accounts of Boyle's life and character will be found in other works to which we have already referred, especially in Dr. Birch's *Life*.



Air-Pump.

THE NEW YORK PUBLIC LIBRARY

THE NEW YORK  
PUBLIC LIBRARY  
ASTOR, LENOX  
TILDEN FOUNDATION



*Engraved by A. Kneller*

SIR ISAAC NEWTON.

*From the original Picture by Van der Bank  
in the possession of the Royal Society.*

Under the superintendence of the Society for the Diffusion of Useful Knowledge

*London: Published by Charles Knight Pall Mall East*









ISAAC NEWTON was born on Christmas-day, 1642 (O. S.), at Woolsthorpe, a hamlet in the parish of Colsterworth, in Lincolnshire. In that spot his family had possessed a small estate for more than a hundred years; and his father died there a few months after his marriage to Harriet Ayscough, and before the birth of his son. The widow soon married again, and removed to North Witham, the rectory of her second husband, Mr. Smith, leaving her son, a weakly child who had not been expected to live through the earliest infancy, under the charge of her mother.

Newton's education was commenced at the parish school, and at the age of twelve he was sent to Grantham for classical instruction. At first he was idle, but soon rose to the head of the school. The peculiar bent of his mind soon showed itself in his recreations. He was fond of drawing, and sometimes wrote verses; but he chiefly amused himself with mechanical contrivances. Among these was a model of a wind-mill, turned either by the wind, or by a mouse enclosed in it, which he called the miller; a mechanical carriage moved by the person who sat in it; and a water-clock, which was long used in the family of Mr. Clarke, an apothecary, with whom he boarded at Grantham. This was not his only method of measuring time: the house at Woolsthorpe, whither he returned at the age of fifteen, still contains dials made by him during his residence there.

Mr. Smith died in 1656, and his widow then returned to Woolsthorpe with her three children by her second marriage. She brought Newton himself also thither, in the hope that he might be useful in the management of the farm. This expectation was fortunately disappointed. When sent to Grantham on business, he used to leave its

execution to the servant who accompanied him, and passed his time in reading, sometimes by the way-side, sometimes at the house of Mr. Clark. His mother no longer opposed the evident tendency of his disposition. He returned to school at Grantham, and was removed thence in his eighteenth year to Trinity College, Cambridge.

The 5th of June, 1660, was the day of his admission as a sizer into that distinguished society. He applied himself eagerly to the study of mathematics, and mastered its difficulties with an ease and rapidity which he was afterwards inclined almost to regret, from an opinion that a closer attention to its elementary parts would have improved the elegance of his own methods of demonstration. In 1664 he became a scholar of his college, and in 1667 was elected to a fellowship, which he retained beyond the regular time of its expiration in 1675, by a special dispensation authorizing him to hold it without taking orders.

It is necessary to return to an earlier date, to trace the series of Newton's discoveries. This is not the occasion for a minute enumeration of them, or for any elaborate discussion of their value or explanation of their principles; but their history and succession require some notice. The earliest appear to have related to pure mathematics. The study of Dr. Wallis's works led him to investigate certain properties of *series*, and this course of research soon conducted him to the celebrated Binomial Theorem. The exact date of his invention of the method of Fluxions is not known; but it was anterior to 1666, when the breaking out of the plague obliged him for a time to quit Cambridge, and consequently when he was only about twenty-three years old.

This change of residence interrupted his optical researches, in which he had already laid the foundation of his great discoveries. He had decomposed light into the coloured rays of which it is compounded, and having thus ascertained the principal cause of the confusion of the images formed by refraction, he had turned his attention to the construction of telescopes which should act by reflection, and be free from this evil. He had not, however, overcome the practical difficulties of his undertaking, when his retreat from Cambridge for a time stopped this train of experiment and invention.

On quitting Cambridge Newton retired to Woolsthorpe, where his mind was principally employed upon the system of the world. The theory of Copernicus and the discoveries of Galileo and Kepler had at length furnished the materials from which the true system was to be deduced. It was indeed all involved in Kepler's celebrated laws. The equable description of areas proved the existence of a central force; the elliptical form of the planetary orbits, and the relation

between their magnitude and the time occupied in describing them, ascertained the law of its variation. But no one had arisen to demonstrate these necessary consequences, or even to conjecture the universal principle from which they were derived. The existence of a central force had been surmised, and the law of its action guessed at; but no proof had been given of either, and little attention had been awakened by the conjecture.

Newton's discovery appears to have been quite independent of any speculations of his predecessors. The circumstances attending it are well known: the very spot in which it first dawned upon him is ascertained. He was sitting in the garden at Woolsthorpe, when the fall of an apple called his attention to the force which caused its descent, to the probable limits of its action and law of its operation. Its power was not sensibly diminished at any distance at which experiments had been made: might it not then extend to the moon and guide that luminary in her orbit? It was certain that her motion was regulated in the same manner as that of the planets round the sun: if, therefore, the law of the sun's action could be ascertained, that by which the earth acted would also be found by analogy. Newton, therefore, proceeded to ascertain by calculation from the known elements of the planetary orbits, the law of the sun's action. The great experiment remained: the trial whether the moon's motions showed the force acting upon her to correspond with the theoretical amount of terrestrial gravity at her distance. The result was disappointment. The trial was to be made by ascertaining the exact space by which the earth's action turned the moon aside from her course in a given time. This depended on her actual distance from the earth, which was only known by comparison with the earth's diameter. The received estimate of that quantity was very erroneous; it proceeded on the supposition that a degree of latitude was only sixty English miles, nearly a seventh part less than its actual length. The calculation of the moon's distance and of the space described by her, gave results involved in the same proportion of error; and thus the space actually described appeared to be a seventh part less than that which corresponded to the theory. It was not Newton's habit to force the results of experiments into conformity with hypothesis. He could not, indeed, abandon his leading idea, which rested, in the case of the planetary motions, on something very nearly amounting to demonstration. But it seemed that some modification was required before it could be applied to the moon's motion, and no satisfactory solution of the difficulty occurred. The scheme therefore was incomplete, and, in conformity

with his constant habit of producing nothing till it was fully matured, Newton kept it undivulged for many years.

On his return to Cambridge Newton again applied himself to the construction of reflecting telescopes, and succeeded in effecting it in 1668. In the following year Dr. Barrow resigned in his favour the Lucasian professorship of mathematics, which Newton continued to hold till the year 1703, when Whiston, who had been his deputy from 1699, succeeded him in the chair. On January 11, 1672, Newton was elected a Fellow of the Royal Society. He was then best known by the invention of the reflecting telescope; but immediately on his election he communicated to the Society the particulars of his theory of light, on which he had already delivered three courses of lectures at Cambridge, and they were shortly afterwards published in the Philosophical Transactions.

It is impossible here to state the various phenomena of light and colours which were first detected and explained by Newton. They entirely changed the science of optics, and every advance which has since been made in it has only added to the importance and confirmed the value of his observations. The success of the new theory was complete. Newton, however, was much vexed and harassed by the discussions which it occasioned. The annoyance which he thus experienced made him even think of abandoning the pursuit of science, and although it failed to withdraw him from the studies to which he was devoted, it confirmed him in his unwillingness to publish their results.

The next few years of Newton's life were not marked by any remarkable events. They were passed almost entirely at Cambridge, in the prosecution of the researches in which he was engaged. The most important incident was the communication to Oldenburgh, and, through him, to Leibnitz, that he possessed a method of determining maxima and minima, of drawing tangents, and performing other difficult mathematical operations. This was the method of fluxions, but he did not announce its name or its processes. Leibnitz, in return, explained to him the principles and processes of the Differential Calculus. This correspondence took place in the years 1676 and 1677: but the method of fluxions had been communicated to Barrow and Collins as early as 1669, in a tract, first printed in 1711, under the title '*Analysis per equationes numero terminorum infinitas*.' Newton had indeed intended to publish his discovery as an introduction to an edition of Kinckhuysen's Algebra, which he undertook to prepare in 1672; but the fear of controversy prevented him, and the method of fluxions was not publicly announced till the appearance of the Prin-

cipia in 1687. The edition of Kinckhuysen's treatise did not appear; but the same year, 1672, was marked by Newton's editing the Geography of Varenus.

In 1679 Newton's attention was again called to the theory of gravitation, and by a fuller investigation of the conditions of elliptical motion, he was confirmed in the opinion that the phenomena of the planets were referable to an attractive force in the sun, of which the intensity varied in the inverse proportion of the square of the distance. The difficulty about the amount of the moon's motion remained, but it was shortly to be removed. In 1679 Picard effected a new measurement of a degree of the earth's surface, and Newton heard of the result at a meeting of the Royal Society in June, 1682. He immediately returned home to repeat his former calculation with these new data. Every step of the process made it more probable that the discrepancy which had so long perplexed him would wholly disappear: and so great was his excitement at the prospect of entire success that he was unable to proceed with the calculation, and intrusted its completion to a friend. The triumph was perfect, and he found the theory of his youth sufficient to explain all the great phenomena of nature.

From this time Newton devoted unremitting attention to the development of his system, and a period of nearly two years was entirely absorbed by it. In 1684 the outline of the mighty work was finished; yet it is likely that it would still have remained unknown, had not Halley, who was himself on the track of some part of the discovery, gone to Cambridge in August of that year to consult Newton about some difficulties he had met with. Newton communicated to him a treatise *De Motu Corporum*, which afterwards, with some additions, formed the first two books of the *Principia*. Even then Halley found it difficult to persuade him to communicate the treatise to the Royal Society, but he finally did so in April, 1686, with a desire that it should not immediately be published, as there were yet many things to complete. Hooke, whose unwearied ingenuity had guessed at the true law of gravity, immediately claimed to himself the honour of the discovery; how unjustly it is needless to say, for the merit consisted not in the conjecture but the demonstration. Newton was inclined in consequence to prevent the publication of the work, or at least of the third part, *De Mundi Systemate*, in which the mathematical conclusions of the former books were applied to the system of the universe. Happily his reluctance was overcome, and the whole work was published in May, 1687. Its doctrines were too novel and surprising to meet with immediate assent; but the illustrious author at once received

the tribute of admiration for the boldness which had formed, and the skill which had developed his theory, and he lived to see it become the common philosophical creed of all nations.

We next find Newton acting in a very different character. James II. had insulted the University of Cambridge by a requisition to admit a Benedictine monk to the degree of Master of Arts without taking the oaths enjoined by the constitution of the University. The mandate was disobeyed; and the Vice-Chancellor was summoned before the Ecclesiastical Commission to answer for the contempt. Nine delegates, of whom Newton was one, were appointed by the University to defend their proceedings; and their exertions were successful. He was soon after elected to the Convention Parliament as member for the University of Cambridge. That parliament was dissolved in February, 1690, and Newton, who was not a candidate for a seat in the one which succeeded it, returned to Cambridge, where he continued to reside for some years, notwithstanding the efforts of Locke, and some other distinguished persons with whom he had become acquainted in London, to fix him permanently in the metropolis.

During this time he continued to be occupied with philosophical research, and with scientific and literary correspondence. Chemical investigations appear to have engaged much of his time; but the principal results of his studies were lost to the world by a fire in his chambers about the year 1692. The consequences of this accident have been very differently related. According to one version, a favourite dog, called Diamond, caused the mischief, and the story has been often told, that Newton was only provoked, by the loss of the labour of years, to the exclamation, "Oh, Diamond! Diamond! thou little knowest the mischief thou hast done." Another, and probably a better authenticated account, represents the disappointment as preying deeply on his spirits for at least a month from the occurrence.

We have more means of tracing Newton's other pursuits about this time. History, chronology, and divinity were his favourite relaxations from science, and his reputation stood high as a proficient in these studies. In 1690 he communicated to Locke his 'Historical account of two notable corruptions of the Scriptures,' which was first published long after his death. About the same time he was engaged in those researches which were afterwards embodied in his *Observations on the Prophecies*: and in December, 1692, he was in correspondence with Bentley on the application of his own system to the support of natural theology.

During the latter part of 1692 and the beginning of 1693 Newton's health was considerably impaired, and he laboured in the summer under some epidemic disorder. It is not likely that the precise character or amount of his indisposition will ever be discovered; but it seems, though the opinion has been much controverted, that for a short time it affected his understanding, and that in September, 1693, he was not in the full possession of his mental faculties. The disease was soon removed, and there is no reason to suppose that it ever recurred. But the course of his life was changed; and from this time forward he devoted himself chiefly to the completion of his former works, and abstained from any new career of continued research.

His time indeed was less at his own disposal than it had been. In 1696, Mr. Montague, the Chancellor of the Exchequer, an early friend of Newton, appointed him to the Wardenship of the Mint, and in 1699 he was raised to the office of Master. He removed to London, and was much occupied, especially during the new coinage in 1696 and 1697, with the duties of his office. Still he found time to superintend the editions of his earlier works, which successively appeared with very material additions and improvements. The great work on Optics appeared for the first time in a complete form in 1704, after the death of Hooke had freed Newton from the fear of new controversies. It was accompanied by some of his earlier mathematical treatises; and contained also, in addition to the principal subject of the work, suggestions on a variety of subjects of the highest philosophical interest, embodied in the shape of queries. Among these is to be found the first suggestion of the polarity of light; and we may mention at the same time, although they occur in a different part of the work, the remarkable conjectures, since verified, of the combustible nature of the diamond, and the existence of an inflammable principle in water. The second edition of the *Principia* appeared under the care of Cotes in 1713, after having been the subject of correspondence between Newton and his editor for nearly four years. Dr. Pemberton published a third edition in 1725, and he frequently communicated about the work with Newton who was then eighty-two years old.

These were the chief scientific employments of Newton's latter life: and it is not necessary to particularize all its minor details. In 1712 he made some improvements in his *Arithmetica Universalis*, a work containing his algebraical discoveries, of which Whiston had surreptitiously published an edition in 1707. It is also worthy of remark that at the beginning of the year 1697, John Bernouilli addressed two problems as a challenge to the mathematicians of Europe, and that

Leibnitz in 1716 made a similar appeal to the English analysts; and that Newton in each case undertook and succeeded in the investigation.

This enumeration of Newton's philosophical employments has far outrun the order of time. After his return to London, compliments and honours flowed in rapidly upon him. In 1699 he was elected one of the first foreign associates of the Académie des Sciences at Paris; and in 1701 he was a second time returned to Parliament by the University of Cambridge. He did not, however, long retain his seat. At the election in 1705 he was at the bottom of the poll, and he does not appear again to have been a candidate. In 1703 he was chosen President of the Royal Society, and held that office till his death. In 1705 he was knighted by Queen Anne upon her visit to Cambridge.

Newton's life in London was one of much dignity and comfort. He was courted by the distinguished of all ranks, and particularly by the Princess of Wales, who derived much pleasure from her intercourse both with him and Leibnitz. His domestic establishment was liberal, and was superintended during great part of his time by his niece, Mrs. Barton, a woman of much beauty and talent, who married Mr. Conduitt, his assistant and successor at the Mint. Newton's liberality was almost boundless, yet he died rich.

The only material drawback to Newton's enjoyment during this portion of his life, seems to have arisen from controversies as to the history and originality of his discoveries; a molestation to which his slowness to publish them very naturally exposed him. There was a long and angry dispute with Leibnitz about the priority of fluxions or the differential calculus; and, after the fashion of most disputes, it diverged widely from the original ground, and it became necessary for Newton to vindicate the religious and metaphysical tendencies of his greatest works. His success was complete on all points. Leibnitz does not appear to have been acquainted with the method of fluxions at the time of his own discovery, but there is now no doubt of Newton's having preceded him by some years; and the attacks made on the tendency of Newton's discoveries have long been remembered only as disgracing their author. But such discussions had always been distasteful to Newton, and this controversy, which was conducted with great rancour by his opponents and some of his supporters, embittered his later years.

The same fate awaited him in another instance. His system of Chronology had been long conceived, but he had not communicated it to any one until he explained it to the Princess of Wales. At her desire, he afterwards, in 1718, drew up a short abstract of it for her



use, and sent it to her on condition that no one else should see it. She afterwards requested that the Abbé Conti might have a copy of it, and Newton complied, but still on the terms that it should not be farther divulged. Conti, however, showed the manuscript at Paris to Freret, who, without the author's permission, translated and published it with observations in opposition to its doctrines. Newton drew up a reply which was printed in the Philosophical Transactions for 1725, and this was the signal for a new attack by Souciet. Newton was then roused to his last great exertion, that of fully digesting his system; which as yet existed only in confused papers, and preparing it for the press. He did not live to complete his task, but the work was left in a state of great forwardness, and was published in 1728 by Mr. Conduitt. Its value is well known. As a refutation of the systems of chronology then received, it is almost demonstrative; and the affirmative conclusions, if not always minutely correct, or even generally satisfactory, are yet among the most valuable contributions which science has made to history.

With the exception of the attack of 1693, Newton's health had usually been very good. But he suffered much from stone during the last few years of his life. His mental faculties remained in general unaffected, but his memory was much impaired. From the year 1725 he lived at Kensington, but was still fond of going occasionally to London, and visited it on February 28th, 1727, to preside at a meeting of the Royal Society. The fatigue appears to have been too great: for the disease attacked him violently on the 4th of March, and he lingered till the 20th, when he died. His sufferings were severe, but his temper was never soured, nor the benevolence of his nature obscured. Indeed his moral was not less admirable than his intellectual character, and it was guided and supported by that religion, which he had studied not from speculative curiosity, but with the serious application of a mind habitually occupied with its duties, and earnestly desirous of its advancement.

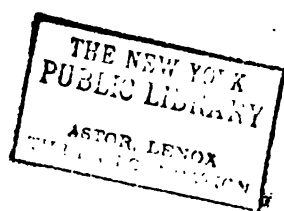
Newton died without a will, and his property descended to Mrs. Conduitt and his other relations in the same degree. He was buried with great pomp in Westminster Abbey, where there is a monument to his memory, erected by his relations. His Chronology appeared, as has been already mentioned, almost immediately after his death; and the *Lectiones Opticæ*, the substance of his lectures at Cambridge in the years 1669, 1670, and 1671, were published from his manuscripts in 1729. In 1733, Mr. Benjamin Smith, one of the descendants of his mother's second marriage, published the Observations on the Pro-

pecies. These, in addition to the works already mentioned, are Newton's principal writings; there are, however, several smaller tracts, some of which appeared during his lifetime, and some after his death, which it is not necessary here to specify. They would have conferred much honour on most philosophers;—they are hardly remembered in reckoning up Newton's titles to fame.

Many portraits of Newton are in existence. The Royal Society possesses two; and Lord Egremont is the owner of one, which is engraved as the frontispiece to Dr. Brewster's *Life of Newton*. Trinity College, Cambridge, abounds in memorials of its greatest ornament. Almost every room dedicated to public purposes possesses a picture of him, and the chapel is adorned by Roubiliac's noble statue. The library also has a bust by the same artist, of perhaps even superior excellence. As works of art these are far superior to any of the paintings extant: but they have not the claim to authenticity possessed by the contemporary portraits. It is remarkable, that until the recent publication of Dr. Brewster's life, no one had thought it worth while to devote an entire work to the history of so remarkable a man as Newton. There is, however, an elaborate memoir of him, written by M. Biot, in the *Biographie Universelle*, which has been republished in the *Library of Useful Knowledge*.



Roubiliac's Statue from the Chapel of Trinity College.





*Engraved by A. W. Forrest.*

MICHAEL ANGELO BUONARROTI

*From a Portrait by L. de' Vecchi  
in the possession of the Capitoline Library*

Printed by the Society for the Extension of Useful Knowledge

*London: Published by Charles Knight, 148, Mark Lane.*







**MICHAEL ANGELO BUONAROTI** was born at the castle of Caprese in Tuscany, on March 6, 1474-5. He was descended from a noble, though not a wealthy family ; and his father endeavoured to check the fondness for drawing which he showed at an early age, lest he should disgrace his parentage by following what was then deemed little better than a mechanical employment. Fortunately for the arts, the bent of the son's genius was too decided to be foiled by the parent's pride ; and in April, 1488, young Buonaroti was placed under the tuition of Ghirlandaio, then the most eminent painter in Italy.

He soon distinguished himself above his fellow pupils, and was fortunate in attracting the notice of Lorenzo de Medici ; but the early death of his patron, and the troubles which ensued in Florence, clouded the brilliant prospects which seemed open to him. He first visited Rome when about twenty-two years old, at the invitation of Cardinal St. Giorgio ; and resided in that city for a year, without being employed to execute anything for his pretended patron. He obtained three commissions, however, from other quarters ; one for a Cupid, a second for a statue of Bacchus, a third for a Virgin and dead Christ, which forms the altar-piece of a chapel in St. Peter's. The latter work was the most important, and established his character as one of the first sculptors of the day.

Returning to Florence soon after the appointment of Soderini to be perpetual Gonfaloniere, or standard-bearer, an office equivalent to that of president of the republic, he found ampler room for the development of his talents in the favour of the chief magistrate ; for whom he executed the celebrated statue of David, in marble, placed in front of the Palazzo Vecchio ; and another statue of David, and a group of

David and Goliath, both in bronze. To this period we are also to refer an oil picture of a Holy Family, painted for Angelo Doni, and now in the Florence gallery; the only oil painting which can be authenticated as proceeding from his hand.

The accounts of Michael Angelo's early life relate so exclusively to his skill and practice as a sculptor, that some wonder may be felt as to the means by which he acquired the technical science and dexterity necessary to the painter. But it was in composition, and as a draughtsman that he excelled, not as a colourist; and the same intimate knowledge of the human figure, and freedom and boldness of hand, which guided his chisel, often, it is said, without a model, will account for the anatomical excellence and energy of his drawings. Nevertheless it is surprising to find him at this early age rivalling, and indeed by general suffrage excelling in his own art Leonardo da Vinci, not only the first painter of his generation, but one of the most accomplished persons of his age. The work to which we allude, the celebrated Cartoon of Pisa, painted as a companion to a battle-piece of Leonardo, has long disappeared; and is generally supposed to have been destroyed clandestinely by Baccio Bandinelli, a rival artist, of whose envious and cowardly temper some amusing anecdotes are related in Benvenuto Cellini's autobiography. It represented a party of Florentine soldiers, disturbed, while bathing in the Arno, by a sudden call to arms. Only one copy of it is said to exist, which is preserved in Mr. Coke's collection at Holkham.

When Julius II. ascended the papal chair, he invited Michael Angelo to Rome, and commissioned him to erect a splendid tomb. The original design, a sketch of which may be seen in Bottari's edition of Vasari, was for an insulated building, thirty-four feet six inches by twenty-three feet, ornamented with forty statues, many of colossal size, and a vast number of bronze and marble columns, basso-relievos, and every species of architectural decoration of the richest sort. This commission, upon the due execution of which Michael Angelo set his heart, as a worthy opportunity of immortalizing his name, was destined to involve him in a long train of vexations. During the life of Julius, the attention which he wished to concentrate on this one great work was distracted by a variety of other employments forced on him by his patron. Upon his death, it was resolved to finish it on a smaller scale: but its progress was then more seriously interrupted by the eagerness of successive Popes to employ the great artist on works which should immortalize their own names as liberal patrons of the arts. Ultimately, after much dissatisfaction and



dispute on the part of Pope Julius's heirs, the form of the monument was altered; and as it now stands in the church of St. Pietro in Vinculis, it consists only of a façade, ornamented by seven statues, three of which are from the hand of Michael Angelo, the others are by inferior artists. The central figure is the celebrated Moses, by many considered the finest modern work of sculpture; and this is the only part of the original composition.

During the same pontificate, Michael Angelo painted the ceiling of the Sistine chapel. The employment was not to his taste; but it was forced upon him by Pope Julius. He had never tried his powers in fresco painting; and that branch of the art, as is well known, involves many difficulties, which, though merely mechanical, it requires some practice and experience to surmount. Having first completed the design in a series of cartoons, he sent to Florence to engage the ablest assistants to be found: but their labours were unsatisfactory, and dismissing them, he set to work himself, and executed the whole vault with his own hands, in the short space of twenty months.

Julius II. died in 1513. The next nine years, comprehending the pontificate of Leo X., are an entire blank in Michael Angelo's life, so far as regards the practice of his art. He was employed the whole time, by the Pope's express order, in superintending some new marble quarries in the mountains of Tuscany.

During the pontificate of Adrian VI. he resided at Florence, where Giuliano de Medici, afterwards Clement VII., employed him to build a new library and sacristy to the church of St. Lorenzo, and a sepulchral chapel, to serve as a mausoleum for the ducal family. He was also employed to execute two monuments in honour of Giuliano, the brother, and Lorenzo de Medici, the nephew, of Leo X. The princes are represented seated, in the Roman military habit, above two sarcophagi. Below are two recumbent figures to each monument, one pair representing Morning and Evening; the other, Day and Night. The reason for this singular choice of personages is not explained.

We cannot enter upon the maze of Italian politics, which led to the siege of Florence by the imperial troops in 1529-30. Michael Angelo's well-known and varied talent led to his being appointed chief engineer and master of the ordnance to the city; in which capacity he gained new honour by his skill, resolution, and patriotism. During this turbulent time he began a picture of Leda, which was sent to France, and fell into the possession of Francis I. It has long been lost; the original cartoon is in the collection of the Royal Academy.

Michael Angelo's second work in fresco, the Last Judgment, occupying the east end of the Sistine chapel, seems to have been

begun in 1533 or 1534. It was not finished till 1541. His last and only other works of this kind were two large pictures in the Pauline chapel, representing the Martyrdom of St. Peter, and the Conversion of St. Paul. These were not completed till he had reached the advanced age of seventy-five.

In 1546 died Antonio da San Gallo, the third architect employed in the rebuilding of St. Peter's. The project of renewing the metropolitan church of Rome was first suggested to the ambitious mind of Pope Julius II. by the impossibility of finding any place in the then existing cathedral, worthy of the splendid monument which he had ordered Michael Angelo to execute. Bramante, Raphael, and San Gallo, were successively appointed to conduct the mighty undertaking, and removed by death. San Gallo had deviated materially from the design of Bramante. Michael Angelo disapproved of his alterations; but was deterred from returning to the original plan by its vast extent, and the necessity of contracting the extent of the work so as to meet the impoverished state of the Papal treasury, produced by the spreading of the Reformation in Germany and England. He accordingly gave in the design from which the present building was erected, which, gigantic as it is, falls short of the dimensions of that which Julius proposed to raise. Having now reached the advanced age of seventy-one, it was with reluctance that he undertook so heavy a charge: It was, indeed, only by the absolute command of the Pope that he was induced to do so; and on the unusual condition that he should receive no salary, as he accepted the office purely from devotional feelings. He also made it a condition that he should be absolutely empowered to discharge any persons employed in the works, and to supply their places at his pleasure.

To the independent and upright feelings which led him to insist on this latter clause, the factious opposition, which harassed the remainder of his life, is partly to be ascribed. Disinterested himself, he suffered no peculation under his administration; and he was repaid by the hatred of a powerful party connected with those whose vanity his appointment wounded, or whose interests his honesty crossed. Repeated attempts were made to procure his removal, to which he would willingly have yielded, but for a due sense of the greatness of the work which he had undertaken, and reluctance to quit it, until too far advanced to be altered and spoiled by some inferior hand. This praiseworthy solicitude was not disappointed. During the life of Paul, and through four succeeding pontificates, he held the situation of chief architect; and before his death, in February, 1563-4, the cupola was raised, and the principal features of the building unalterably determined.

His earlier architectural works are to be seen at Florence. They consist of the façade and sacristy of the church of St. Lorenzo, left unfinished by Brunelleschi, the mausoleum of the Medici family, and the Laurentian library. During the latter part of his life he amused his leisure hours by working on a group representing a dead Christ, supported by the Virgin and Nicodemus, which he intended for an altarpiece to the chapel in which he should himself be interred. It was never finished, however, and is now in the cathedral of Florence. But, from the time of his assuming the charge of St. Peter's, his attention was almost entirely devoted to architecture. His chief works were the completion of the Farnese palace, begun by San Gallo; the palace of the Senator of Rome, the picture galleries, and flight of steps leading up to the convent of Araceli, all situated on the Capitoline hill; and the conversion of the baths of Diocletian into the church of S. Maria degli Angeli.

Michael Angelo, though he painted few pictures himself, frequently gave designs to be executed by his favourite pupils, especially Sebastiano del Piombo. Such was the origin of the magnificent Raising of Lazarus, in the National Gallery. Like many artists of that age, he aspired to be a poet. His works consist chiefly of sonnets, modelled on the style of Petrarch. Religion and Love are the prevailing subjects.

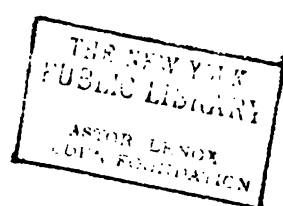
The Life of Michael Angelo, by Mr. Duppa, will gratify the curiosity of the English reader, who wishes to pursue the subject beyond this mere list of the artist's principal works. To the Italian reader we may recommend the lives of Condivi and Vasari, as containing the original information from which subsequent writers have drawn their accounts. To do justice to the versatile, yet profound genius of this great man, is a task which we must leave to such writers as Reynolds and Fuseli, in whose lectures the reader will find ample evidence of the profound admiration with which they regarded him. Nor can we conclude better than with the short but energetic character given by the latter, of his favourite artist's style of genius, and of his principal works:—

“Sublimity of conception, grandeur of form, and breadth of manner, are the elements of Michael Angelo's style. By these principles he selected or rejected the objects of imitation. As painter, as sculptor, as architect, he attempted, and above any other man, succeeded, to unite magnificence of plan, and endless variety of subordinate parts, with the utmost simplicity and breadth. His line is uniformly grand: character and beauty were admitted only as far as they could be made subservient to grandeur. To give the appearance of perfect ease to the

most perplexing difficulty, was the exclusive power of Michael Angelo. He is the inventor of epic painting, in that sublime circle of the Sistine chapel which exhibits the origin, the progress, and the final dispensations of theocracy. He has personified motion in the groups of the Cartoon of Pisa; embodied sentiment on the monuments of S. Lorenzo; unravelled the features of meditation in the Prophets and Sibyls of the Sistine chapel; and in the Last Judgment, with every attitude that varies the human body, traced the master-trait of every passion that sways the human heart. Though, as sculptor, he expressed the character of flesh more perfectly than all who came before or went after him, yet he never submitted to copy an individual, Julius II. only excepted; and in him he represented the reigning passion rather than the man. In painting he has contented himself with a negative colour, and as the painter of mankind, rejected all meretricious ornament. The fabric of St. Peter's, scattered into infinity of jarring parts by Bramante and his successors, he concentrated; suspended the cupola, and to the most complex gave the air of the most simple of edifices. Such, take him for all in all, was M. Angelo, the salt of art: sometimes he no doubt had his moments of dereliction, deviated into manner, or perplexed the grandeur of his forms with futile and ostentatious anatomy: both met with armies of copyists; and it has been his fate to be censured for their folly."—(Lecture II.)



From the Monument of Giuliano de Medici.





Engraved by J. P. Goussier.

# MOLIERE.

*From the original Picture of Lebrun's School  
in the collection of the Musée National.*

By the Superintendence of the Society for the Diffusion of Useful Knowledge.

LONDON: Printed by W. B. Nichols, in the Strand, 1817.









**MOLIERE**, the contemporary of Corneille and Racine, whose original and real name was Jean Baptiste Poquelin, was born at Paris on the 15th January, 1622. His father and mother were both in trade ; and they brought up their son to their own occupation. At the age of fourteen, young Poquelin could neither read, write, nor cast accounts. But the grandfather was very fond of him ; and being himself a great lover of plays, often took his favourite to the theatre. The natural genius of the boy was, by this initiation, kindled into a decided taste for dramatic entertainments : a disgust to trade was the consequence, and a desire of that mental cultivation from which he had hitherto been debarred. His father consented at length to his becoming a pupil of the Jesuits at the College of Clermont. He remained there five years, and was fortunate enough to be the class-fellow of Armand de Bourbon, Prince de Conti, whose friendship and protection proved of signal service to him in after-life. He studied under the celebrated Gassendi, who was so impressed by the apparent aptitude of young Poquelin to receive instruction, that he admitted him to the private lectures given to his other pupils. Gassendi was in the habit of breaking a lance with two great rivals : Aristotle, at the head of ancient, and Descartes, then at the head of modern philosophy. By witnessing this combat, Poquelin acquired a habit of independent reasoning, sound principles, extensive knowledge, and that feeling of practical good sense, which was so conspicuous not only in his most laboured, but even in his lightest productions.

His studies under Gassendi were abruptly terminated by the following circumstance. His father was attached to the court in the double capacity of valet-de-chambre and tapestry-maker ; and the son had

the reversion of these places. When Louis XIII. went to Narbonne in 1641, the old man was ill, and the young one was obliged to officiate for him. On his return to Paris, his passion for the stage, which had first led him into the paths of literature, revived with renewed strength. The taste of Cardinal de Richelieu for theatrical performances was communicated to the nation at large, and a peculiar protection was granted to dramatic poets. Many little societies were formed for acting plays in private houses, for the amusement at least of the performers. Poquelin collected a company of young stage-stricken heroes, who so far exceeded all their rivals, as to earn for their establishment the pompous title of *The Illustrious Theatre*. He now determined to make the stage his profession, and changing his name, according to the usage in such cases, adopted that of Moliere.

He disappears during the time of the civil wars, from 1648 to 1652; but we may suppose the interval to have been passed in composing some of those pieces which were afterwards brought before the public. When the disturbances ceased, Moliere, in partnership with an actress of Champagne, named *La Béjard*, formed a strolling company; and his first regular piece, called *L'Etourdi*, or the *Blunderer*, was performed at Lyons in 1653. Another company of comedians settled in that town was deserted by the spectators in favour of these clever vagabonds; and the principal performers of the regular establishment took the hint, pocketed their dignity, and joined Moliere. The united company transferred itself to Languedoc, and were retained in the service of the Prince of Conti. During the Carnival of 1658, the troop, having resumed their vagrant life, were playing at Grenoble. The following summer was passed at Rouen. When so near Paris, Moliere made occasional journeys thither, with the earnest hope of bettering his fortune in the metropolis, where the market for talent is always brisk and open, the competition, though severe, fair and encouraging. Once more he received protection from his august fellow-collegian, who introduced him to Monsieur, and ultimately to the King himself. The company appeared before their Majesties and the court for the first time, on the 3d of November, 1658, on a stage erected in the Hall of the Guards in the Old Louvre. Their success was so complete that the King gave orders for their permanent settlement in Paris, and they were allowed to act alternately with the Italian players in the Hall of the Petit Bourbon. In 1663 a pension of a thousand livres was granted to Moliere, and in 1665 his company was taken altogether into the King's service.

As in the course of about fifteen years he produced more than double that number of dramatic pieces, instead of giving, within our

narrow limits, a mere dry catalogue of titles, we shall make some more detailed remarks on a few of those masterpieces, in different styles, which not only raised the character of French comedy to a great height in France itself, but in a great measure furnished the staple to some of our own most distinguished writers.

Among many persons of taste and judgment, the *Misanthrope* has borne the character of being the most finished of all Moliere's pieces ; of combining the most powerful efforts of united genius and art. The subject is single, and the unities are exactly observed. The principal person of the drama is strongly conceived, and brought out with the boldest strokes of the master's pencil : it is throughout uniform, and in strict keeping. The subordinate persons are equally well drawn, and fitted for their business in the scene, so as to throw an artist-like light upon the chief figure. The scenes and incidents are so contrived and conducted as to diversify the main character, and set it in various points of view. The sentiments are strong and nervous as well as proper ; and the good sense with which the piece is fraught, proves that the bustle and dissipation of the court and the theatre had not obliterated the lessons of the college, or the lectures of Gassendi. The title of the play will at once bring to the mind of an Englishman our own *Timon of Athens* ; but there are scarcely any other points of resemblance. The ancient and the modern Man-hater had little in common : the Athenian was the victim of personal ill-treatment ; having suffered by excess of good-nature and credulity, he runs into the other extreme of suspicion and revenge. Moliere's Man-hater owes his character to the severity of virtue, which can give no quarter to the vices of mankind ; to that sincerity which disdains indiscriminate complaisance, and the prostitution of the language of friendship to the flattery of fools and knaves. Wycherley, in his *Plain Dealer*, has given the French *Misanthrope* an English dress. Manly is a character of humour, speaking and acting from a peculiar bias of temper and inclination ; but the coarseness of the *plain dealing* is not to be tolerated, and what Manly *does* goes near to counteract the moral effect of what he *says*.

By way of contrasting the various talents of the author, than whom none better understood human nature in its various ramifications, or copied more skilfully every shade and gradation of manners, we may just mention the *Bourgeois Gentilhomme*, exhibiting the folly and affectation of a cit turned man of fashion. If the moral of the *Misanthrope* be pure, the wit of the *Bourgeois* is terse and diverting.

In several of his comedies he has treated medicine and its professors not only with freedom but severity ; it was, however, perverted medicine

only, and its quack professors that were the subjects of his ridicule. The respectable members of the faculty could be no more affected by the satire, nor displeased by what they could not fear, than a true prophet by the punishment of imposture. Those who are acquainted with the history of the science will recollect the state of it at Paris in Moliere's time, and the character of the physicians. Their whole employment was confined to searching after visionary specifics, and experimental trickery in chemistry. The cause of a disease was never inquired after, nor the symptoms regarded; but hypothetical jargon and random prescription were thrown like dust into the eyes of the patient, to the exclusion of a practice founded on science and observation. Thus medicine became a pest instead of a remedy; and this state of things justified the chastisement inflicted.

*Les Précieuses Ridicules* is a comedy intended to reprove a vain, fantastical, and preposterous humour prevailing very much about that time in France. It had the desired effect, and conduced materially towards rooting out a taste in manners so unreasonable and ridiculous.

*Tartuffe*, or *The Impostor*, has occasionally, and even recently, sometimes to the disturbance of the public peace in France, given great offence not only to those who felt the justice, and winced under the severity of the satire; but to others, who suspected that a blow was aimed at religion, under the mask of an attack upon hypocrisy. But its intrinsic merit, the truth of the drawing, and the justness of the colouring, have secured patrons for it among persons of unquestionable sense, virtue, learning, and taste; and it has always triumphed over the violence of opposition. Cibber, a vamerper of other men's plays, has borrowed from it his favourite *Nonjuror*, and applied it to the purposes of a political party. On this adaptation has been grafted a more modern attack on the Methodists, under the title of *The Hypocrite*. But however great may be the merit of this celebrated drama, it cannot boast of entire originality. Machiavelli left behind him three comedies, the fruits of a statesman's leisure hours. In all three, the author has exhibited the hand of a master; he has painted mankind in the spirit of truth, and unmasked falsehood and hypocrisy in a tone of profound contempt. Two monks, a brother Timothy and a brother Alberico, are represented with too much wit and keenness of sarcasm to have been overlooked by Moliere in his working up of the third specimen. The first three acts of the *Tartuffe* were played for the first time at court before the piece was finished. Masques of pomp, magnificence and panegyric, such as usually furnish out the amusement of royal saloons, are forgotten as soon as they have served the purpose of the moment: but masterpieces like that now in question perpetuate their

own renown, and leave a lasting memorial of what is supposed to be a phenomenon, a princely taste for genuine wit.

*Les Fâcheux* was the first piece in which dancing was so connected with the dramatic action, as to fill up the intervals without breaking the thread of the story.

*Le Mariage Forcé* was borrowed from Rabelais, to whom both Moliere and La Fontaine were deeply indebted. The Aristotelian and Pyrrhonian philosophy, as travestied by modern doctors, furnishes occasion for lively satire and clever buffoonery. The horror with which Pancrace calls down the vengeance of heaven on him who should dare to say the *form* of a hat, instead of the *figure* of a hat, is a pleasant parody on the unintelligible absurdities of the schools. According to Marphurius, philosophy commands us to suspend our judgment, and to speak of every thing with uncertainty; not to say *I am come*, but, *I think that I am come*.

*La Princesse d'Elide*, though not one of Moliere's happiest efforts, deserves notice on account of its contributing to the festivities of the court, by an adaptation of ingenious allegories to the manners and events of the time. This satire was aimed at the illusion of Judicial Astrology, after which many princes of the period were running mad; and in particular Victor Amadeus, Duke of Savoy, father of the Duchess of Burgundy, who kept an astrologer about his person even after his abdication. The dramatic antiquary may find some amusement in comparing the fêtes of the French court with the masques of Ben Jonson, Davenant, and others, exhibited before our James I. and Charles I.; but here the interest ends. It is sufficient to remark, that the masques of the English court owed their power of pleasing to the ingenuity of the machinist and the flattery of the poet. The little dramas performed before the royal family of France tickled the ears of the audience by the pungency of their wit and ridicule.

The *Miser* has been pretty closely translated, for the version is little more, by Henry Fielding; but not so happily as he himself seems to have imagined.

The subject of that excellent comedy, *Les Femmes Savantes*, in which the ridicule is kept within reasonable bounds, and female faults and virtues are painted with a proper gradation of colouring, where what the painters call a *medium tint* harmonizes the extremes of light and shade, was taken up by Goldoni with that coarse and abrupt pencilling of black and white, which has always been the vice of the Italian stage. It has indeed been advanced as a reproach to Moliere, that he too often charged his comic pictures with the extravagance of caricature: but if we compare even the most farcical of his scenes

with the speaking pantomimes and half-improvisations of Italy, we must pronounce him a model of delicacy and classical propriety.

His last comedy was *Le Malade Imaginaire*. It was acted for the fourth time on the 17th February, 1673. The principal character represented is that of a sick man, who, to carry on a purpose of the plot, pretends to be dead. This part was played by Moliere himself. The popular story was, that when he was to discover that it was only a feint, he could neither speak nor get up, being actually dead. The wits and epigrammatists made the most of the occurrence; those who could not write good French, treated it with bad Latin. But unluckily for the stability of their conceits, they were not built on the foundation of truth. Though very ill, and obviously in much pain, he was able to finish the play. He went home, and was put to bed: his cough increased violently; a vessel burst in his lungs, and he was suffocated with blood in about half an hour after. He was only in his fifty-second year when this event took place. The King was extremely affected at this sudden loss, by which, as Johnson said of Garrick, the gaiety of nations was eclipsed; and as a strong mark of his regard, he prevailed with the archbishop of Paris to allow of his being interred in consecrated ground. Nothing short of so absolute a King's interposition could have effected this; for, independently of the general sentence of excommunication then in force against scenic performers, Moliere had drawn upon himself the resentment of the ecclesiastics in particular, by exposing the hypocrites of their cloth, as well as the bigots among the laity. Those who ridicule folly and knavery in all orders of men must expect to be treated as Moliere was, and to have the foolish and knavish of all orders for enemies. During his life, Paris and the court were stirred up and inflamed against the dramatist; and on more than one occasion, he must have fallen a sacrifice to the indignation of the clergy, had he not been protected by the King. The friend of his life did not desert him when he was dead; but procured for his insensible remains that decent respect, which all nations have consented to pay, as a tribute even to themselves.

Voltaire characterizes Moliere as the best comic poet of any nation; and treats the posthumous hostility which made a difficulty about his burial as a reproach both to France and to the Catholic religion. Professing to have reperused the comedians of antiquity for the purpose of comparison, he gives it as his judgment, that the French dramatist is entitled to the preference. He grounds this decision on the art and regularity of the modern theatre, contrasted with the unconnected scenes of the ancients, their weak intrigues, and the

strange practice of declaring by the mouths of the actors, in cold and unnatural monologues, what they had done and what they intended to do. He concludes by saying that Moliere did for comedy what Corneille had done for tragedy; and that the French were superior on this ground to all the people upon earth. A country possessing such a comic drama as ours, throughout the course of about two centuries, with *Much ado about Nothing* at one end of the list, and *The School for Scandal* at the other, will be inclined to demur to this broad national assumption: but we, in our turn, must in candour confess, that though the chronological precedence of Shakspeare, Jonson, Fletcher, Massinger, and Ford, had established a glorious stage for us before Moliere was born, or while he was yet in petticoats; yet our most eminent comic writers in the reigns of William III., Anne, and George I., drank deep and often from the abundant source of French comedy. But Moliere's influence was most beneficially exerted in reclaiming his countrymen from a fondness for such Italian conceits as ringing the changes upon *odours* and *ardours*, &c., to which authors like Scudery, Voiture, and Balzac had given an ephemeral fashion. Boileau and Moliere principally contributed to arm the French against the invasion from beyond the Alps, of such madrigal-writers as Marini, Achillini, and Prédi.

It is not true that Moliere, when he commenced his career, found the theatre absolutely destitute of good comedies. Corneille had already produced *Le Menteur*, a piece combining character with intrigue, imported from the Spanish stage. Moliere had produced only two of his most esteemed plays, when the public was gratified with *La Mère Coquette* of Quinault, than which few pieces were more happy either in point of character or intrigue. But if Corneille be the first legitimate model for tragedy, Moliere was so for comedy. The general shaping of his plots, the connexion of his scenes, his dramatic consistency and propriety were attempted to be copied by succeeding writers: but who could compete with him in wit and spirit? His well-directed attacks did more than any thing to rescue the public from the impertinence of subaltern courtiers affecting airs of importance; from the affectation of conceited, and the pedantry of learned, ladies; from the quackery of professional costume and barbarous Latin on the part of the medical tribe. Moliere was the legislator of conventional proprieties. That period might well be called the Augustan age of France, which saw the tragedies of Corneille and Racine; the comedies of Moliere; the birth of modern music in the symphonies of Lulli; the pulpit eloquence of Bossuet and Bourdaloue. Louis XIV. was the hearer and the patron of all these; and his taste was duly appre-

ciated and adopted by the accomplished Madame, by a Condé, a Turenne, and a Colbert, followed by a long train of eminent men in every department of the state and of society.

Little has come down to us respecting Moliere's personal history or habits, excepting that his marriage was not among the happy or creditable events of his life. So little did he in his own case weigh the evils of disproportioned age, however sarcastically he might imagine them in fictitious scenes, that he took for his partner the daughter of La Béjard, the associate of his strolling career. If his choice were a fault, it carried its punishment along with it. He was very jealous, and the young lady was an accomplished coquette. The bickerings of married life were the frequent and successful topics of his comedies; and his enemies asserted, that in drawing such scenes, he possessed the advantage of painting from the life. Of that ridicule which had so often set the theatre in a roar, he was himself the serious subject, the repentant and writhing victim.

Fuller accounts of Moliere are to be found prefixed to the best editions of his works: we may mention those of Joly, Petitot, and Auger. An article of considerable length, by the last-named author, is devoted to our poet in the *Biographie Universelle*.



Scene from *Les Précieuses Ridicules*.







Engraved by J. Smith

CHARLES JAMES FOX.

*From a Picture by Sir Joshua Reynolds,  
on the possession of Lord Castlereagh.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

London: Published by Charles Knight, Pall Mall East.







**THE** Right Honourable Charles James Fox was third son of the Right Honourable Henry Fox, afterwards Lord Holland, and of Lady Georgina Caroline Fox, eldest daughter of Charles, second Duke of Richmond. He was born January 24th, 1749, N. S.

Mr. Fox received his education at Eton ; and the favourite studies of the place had more than ordinary influence over his tastes and literary pursuits in after-life. Before he left school, his father was so imprudent as to carry him to Paris and Spa. To his early associations at the latter place may be ascribed that propensity to gaming, which was the bane of two-thirds of his life. As the present article is not designed to be a mere panegyric, we abandon the indulgence of this fatal passion to the severest censure that can be bestowed upon it by the philosopher and the moralist : but justice demands it at our hands to say, that after the adjustment of Mr. Fox's affairs by his friends, personal and political, he resolutely conquered what habit had almost raised into second nature, and abstained from play with scrupulous fidelity. It may further be remarked, that while the paroxysms of the fever were most violent, his mind was never interrupted from more worthy objects of pursuit.

The following anecdote will show the divided empire which discordant passions alternately usurped over his heart. On a night when he had sustained some serious losses, his deportment assumed so much of the character of despair, that his friends became uneasy : they followed him at distance enough to elude his observation, from the clubhouse to his home in the neighbourhood. They knocked at his door in time, as they thought, to have prevented any rash act, and rushed into the library. There they found the object of their anxiety stretched on the ground without his coat, before the fire : his hand neither grasping a razor nor a pistol, but his eyes intently fixed on the pages of

Herodotus. The old historian had engrossed him wholly from the moment when he took up the volume, and the ruins of his own air-built castles vanished from before him, as soon as he got sight of the venerable remains of the ancient world.

At Oxford Mr. Fox distinguished himself by his powers of application, as well as by the intuitive quickness of his parts. On quitting the university, he accompanied his father and mother to the south of Europe. Not finding a good Italian master at Naples, he taught himself that language during the winter, and contracted a strong partiality for Italian literature. In a letter from Florence to Mr. Fitz-Patrick, he conjures that gentleman to learn Italian as fast as he can, if it were only to read Ariosto; and adds, "There is more good poetry in Italian than in all other languages I understand put together." At a later period of life, if we may judge from the tenor of his correspondence with eminent scholars, he would have transferred that praise from the Italian to the Greek tongue. At this time he was very fond of acting plays, and was in all respects the man of fashion. Those who recollect the simplicity, bordering on negligence, of his outward garb late in life, will smile at the idea of Mr. Fox with a powdered toupee and red heels to his shoes, the hero of private theatricals. During his absence, in 1768, he was chosen to represent Midhurst, and made his first speech on the 15th April, 1769. According to Horace Walpole, he spoke with violence, but with infinite superiority of parts.

Circumscribed as we are as to space, we shall not follow Mr. Fox's subaltern career in the House of Commons. It was his breach with Lord North that raised him into a party leader. He had previously formed an intimate acquaintance with Mr. Burke. He began by receiving the lessons of that eminent person as a pupil; but the master was soon so convinced of his scholar's greatness of character, and statesman-like turn of mind, that he resigned the lead to him, and became an efficient coadjutor in the Rockingham party, of which, in the House of Commons, he had almost been the dictator. The American war roused all the energies of Mr. Fox's mind. The discussions to which it gave rise involved all the first principles of free government. The vicissitudes of the contest tried the firmness of the parliamentary opposition. Its duration exercised their perseverance. Its magnitude and the dangers of the country called forth their powers. Gibbon says, "Mr. Fox discovered powers for regular debate, which neither his friends hoped nor his enemies dreaded." The following passage, from a letter to Mr. Fitz-Patrick, written in 1778, illustrates

his honourable and independent character: "People flatter me that I continue to gain rather than lose estimation as an orator; and I am so convinced this is all I ever shall gain (unless I choose to be one of the meanest of men), that I never think of any other object of ambition. I am certainly ambitious by nature, but I have, or think I have, totally subdued that passion. I have still as much vanity as ever, which is a happier passion by far, because great reputation, I think, I may acquire and keep; great situations I never can acquire, nor, if acquired, keep, without making sacrifices that I will never make." In the summer of 1778, he rejected Lord Weymouth's overtures to join the ministry, and took his station as the leading commoner in the Rockingham party, to which he had become attached on principle long before he enlisted permanently in its ranks. The conspicuous features of that party, and of Mr. Fox's public character, were the love of peace with foreign powers, the spirit of conciliation in home management, an ardent attachment to civil and religious liberty.

The day of triumph came at last, when a resolution against the further prosecution of the American war was carried in the Commons. The King was compelled, reluctantly, to part with the supporters of his favourite principles, and had nothing left but to sow the seeds of disunion between the Rockingham and Chatham or Shelburne party, united on the subject of America, but disagreeing on many other points both of external and internal policy. In this he was but too successful. We have neither space nor inclination to unravel the web of court intrigue; but we may remark that Lord Rockingham's demands were too extensive to be palatable: they involved the independence of America, the pacification of Ireland, bills for economical and parliamentary reform, to be brought into Parliament as ministerial measures. But the untimely death of Lord Rockingham frustrated his enlightened and enlarged designs, by dissolving the ministry over which he had presided. Mr. Fox has been blamed for the precipitancy of his resignation. The tone of sentiment in a letter before quoted will both account and apologise for the rashness if it were such; and it is obvious that the sacrifice of personal feeling, or even of political consistency, could not long have deferred it, amidst the cabals and clashing interests of party. Mr. Fox's policy was to detach Holland and America from France, and to form a continental balance against the House of Bourbon. Lord Shelburne's system was to conciliate France, and to treat her allies as dependent powers. Lord Shelburne had the ear of the King. He strengthened himself with some of the old supporters of the American war, to fill the vacant

offices, and made Mr. Pitt, just rising into eminence, his Chancellor of the Exchequer. There were now three parties in the Commons ; the ministerial, the Whig or Rockingham, and the third consisting of those members of the late war ministry who had not been invited to join the present. A coalition of some two of these three parties was almost unavoidable : the public would have most approved of a reunion among the Whigs ; but there had been too much of mutual recrimination and dispute to admit of reconciliation. Nothing, therefore, remained but a junction of the two parties in opposition. A judicious friend of Mr. Fox said, " that to undertake the government with Lord North, was to risk their credit on very unsafe grounds. Unless a real good government is the consequence of this junction, nothing can justify it to the public." Popular feeling was strongly against this coalition, mainly on account of some personal acrimony vented by Mr. Fox, in the boiling over of his wrath during the American contest, which seemed to bear upon the moral character of his opponent. It is to be considered, however, that the most amiable persons, if enthusiastic, are apt in the heat of passion to launch out into invective far more violent than their natural benevolence would justify in their cooler moments. The question on which Mr. Fox and Lord North had been so acrimoniously opposed, had ceased to exist : and perhaps there existed no solid reason against the union of the two parties. But the measure was almost universally believed to arise from corrupt motives : it afforded a fine scope for satire and caricature ; and these have no small influence upon the politics of the multitude. And while the people were displeased, the King was decidedly unfriendly to the administration which had forced itself upon him. He considered the Rockingham party as enemies to his prerogative, as well as friends to American independence. He was forced to take them in, but resolved to throw them out again. The unpopular India bill, which Mr. Pitt afterwards adopted with some modifications, furnished the opportunity. The offence taken by the people against the coalition, made them lend a ready ear to the charge of ministerial oligarchy : the King disguised his sentiments till the last moment, procured the rejection of the bill in the Lords, and instantly dismissed his ministers.

The coalition was still in possession of the House of Commons ; but the voice of the people supported the minister, a dissolution was resorted to, and the will of the King was accomplished.

From 1784 to 1792, Mr. Fox was leader of a powerful party in the House of Commons, in opposition to Mr. Pitt. The Westminster Scrutiny, the Regency, the abatement of Impeachments by a dissolution



of Parliament, the Libel Bill, the Russian Armament, and the Repeal of the Corporation and Test Acts, were the topics which called forth his most powerful exertions. His force as a professed orator was conspicuously displayed in Westminster Hall, on the trial of Warren Hastings; but the triumph of his talents is to be found in those masterly replies to his antagonists, in which cutting sarcasm and close argument, logical acuteness and metaphysical subtlety were so combined, as to surpass all that modern experience had witnessed. The constitutional doctrines of Mr. Fox on the Regency question were much canvassed, and, by many, severely censured. The fact was, that the case was new; provided for neither by law, precedent, nor analogy. Lord Loughborough first suggested the Prince's claim of right; and it was hastily adopted by Mr. Fox, who had returned from Italy just as the discussion was pending. Mr. Fox's Libel Bill places him among the most constitutional of our legislators. He saved his country from an unnecessary, unjust, and expensive war, by his exertions on occasion of the Russian Armament.

The controversy on the Test and Corporation Acts has lost its interest, from having since been satisfactorily set at rest. But as, in a sketch like the present, we have more to do with the character of Mr. Fox's mind than with his political history, we will here introduce an anecdote which the writer of this life heard related many years ago, by Dr. Abraham Rees, well known both in the scientific world, and as a leading divine in the dissenting interest. We have already spoken of the intuitive quickness of Mr. Fox's parts; and the following anecdote will set that peculiarity in a strong light.

On the day of the debate, Dr. Rees waited on Mr. Fox with a deputation, to engage his support in their cause. He received them courteously; but, though a friend to religious liberty, was evidently unacquainted with the strong points and principal bearings of their peculiar case. He listened attentively to their exposition, and, with an eye that looked them *through and through*, put four or five searching questions. They withdrew after a short conference, and as they walked up St. James's Street, Mr. Fox passed them booted, as going to take air and exercise, to enable him to encounter the heat of the House and the storm of debate. From the gallery they saw him enter the House with whip in hand, as just dismounted. When he rose to speak, he displayed such mastery of his subject, his arguments and illustrations were so various, his views so profound and statesman-like, that a stranger must have imagined the question at issue between the high church party and the dissenters to have been the main subject

of his study throughout life. That his principles of civil and religious liberty should have enabled him to declaim in splendid generalities was to be expected; but he entered as fully and deeply into the fundamental principles and most subtle distinctions of the question, as did those to whom it was of vital importance, and that after a short conference of some twenty minutes.

The French revolution is a topic of such magnitude, that we can only touch upon Mr. Fox's opinions and conduct with respect to it. After the taking of the Bastille, he describes it as "the greatest, and much the best event that ever happened in the world: all my prepossessions against French connections for this country will be at an end, and indeed most part of my European system of politics will be altered, if this revolution has the consequence that I expect." But it had not that consequence; and his views were completely changed by the trial and execution of the King and Queen of France. But because he did not catch that contagious disease, made up of alarm and desperate violence, which involved his country in a disastrous war, he was represented as the blind apologist of injustice and massacre, as the careless, if not jacobinical spectator of the downfall of monarchy. Mr. Burke was the first to quarrel with Mr. Fox, and this quarrel led to the temporary estrangement from him of many of his oldest and most valuable friends. But "time and the hour" restored the good understanding between the members of the party, with the exception of Mr. Burke, who died while the paroxysm of Antigallican mania was at its height.

Mr. Fox opposed to the utmost the war, into which the minister was unwillingly forced. But as his passions became heated, and the difficulties of his situation increased, Mr. Pitt adopted all Mr. Burke's views, and the rash project of a *bellum internecinum*. Both the public principles and the personal character of Mr. Fox were the subject of daily calumnies; and the warmth of his early testimony in favour of the French revolution was continually thrown in his teeth, after the 10th of August, the massacres of September, and the success of Dumourier. But his whole conduct during this struggle was clear and consistent. At the dawn of the revolution, he felt and spoke as a citizen of the world; but he was the last man alive to have merged patriotism in the vague generalities of universal benevolence. When his own country became implicated in the strife, he no longer felt and spoke as a citizen of the world, but as a British statesman; and endeavoured to persuade his countrymen, not for French interests but for their own, to stand aloof from continental politics, relying, for

the maintenance of a proud independence and dignified neutrality, on their insular situation and their wooden walls. His advice was not listened to, and his mind grew indisposed towards public business. He says in a letter, dated April, 1795, "I am perfectly happy in the country. I have quite resources enough to employ my mind, and the great resource of literature I am fonder of every day." After making a vigorous, but unsuccessful opposition to the Treason and Sedition bills, he and his remaining friends seceded from parliament. He passed the years from 1797 to 1802, principally in retirement at St. Ann's Hill; and they were the happiest of his life. His mornings passed in gardening and farming, his evenings over books and in conversation with his family and friends. During this period, his attention was much given to the Greek Tragedies and to Homer, whom he read not only with the ardent mind of a poet, but with the microscopic eye of a critic. His correspondence with an eminent scholar of the time was full of sagacious remarks on the suggestions and explanations of the commentators, as well as on the text of the poem. At this time also he conceived the plan of that history of which he left only a splendid fragment in a state fit for publication. He had been diligent in collecting materials, and scrupulous in verifying them. His partiality for the Greek classics followed him into this pursuit, and probably retarded his progress. He is considered to have taken for his model Thucydides, a writer strictly impartial in his narrative, grave even to severity in his style. He went to Paris with Mrs. Fox in the summer of 1802, partly to satisfy their mutual curiosity after so long an estrangement from the Continent, but principally for the purpose of examining the copious materials for the reign of James II. deposited in the Scotch college there. Every thing was thrown open to him in the most liberal manner, and, as the unflinching friend of peace through good and evil report, he was received with enthusiasm both by the people and the government. He had several interviews with Buonaparte: the chief topics of their conversation were the concordat, the trial by jury, the freedom, amounting in the opinion of the First Consul to licentiousness, of the English press, the difference between Asiatic and European society. On one occasion he indignantly repelled the charge against Mr. Windham, of being accessory to the plot of the *infernal machine*, alleging the utter impossibility of an English gentleman descending to so disgraceful a device. During his stay in France, he visited La Fayette at his country seat of La Grange.

Our limits will not allow us to enter, ever so cursorily, into his political career after the renewal of the war. His advice was wise,

and consistent with himself; but it was not accepted. The King's dislike of him was not to be overcome. The death of Mr. Pitt, however, made the admission of Mr. Fox and the Whigs, in conjunction with Lord Grenville, a matter of necessity. Mr. Fox's desire of peace induced him to take the office of Secretary of State for Foreign Affairs; and, before his fatal illness, he had begun a negotiation for that main object of his whole life, with every apparent prospect of success. The hopes entertained from his accession to power were prematurely cut off; but his short career in office was honourably marked by the ministerial measure, determined on during his life, and carried after his decease, of the abolition of the Slave Trade.

The complaint of which he died was dropsy, occasioned probably by the duties of office, and the fatigue of constant attendance in the House of Commons, after the comparative seclusion and learned ease in which he had lived for several years. He expired on the 13th of September, 1806, with his senses perfect and his understanding unclouded to the last.

We conclude this brief account of Mr. Fox with the character drawn of him by one who knew him well, and was fully qualified to appreciate him,—Sir James Macintosh.

“Mr. Fox united, in a most remarkable degree, the seemingly repugnant characters of the mildest of men and the most vehement of orators. In private life he was gentle, modest, placable, kind, of simple manners, and so averse from dogmatism, as to be not only unostentatious, but even something inactive in conversation. His superiority was never felt but in the instruction which he imparted, or in the attention which his generous preference usually directed to the more obscure members of the company. The simplicity of his manners was far from excluding that perfect urbanity and amenity which flowed still more from the mildness of his nature, than from familiar intercourse with the most polished society of Europe. The pleasantry perhaps of no man of wit had so unlaboured an appearance. It seemed rather to escape from his mind, than to be produced by it. He had lived on the most intimate terms with all his contemporaries distinguished by wit, politeness, or philosophy; by learning, or the talents of public life. In the course of thirty years he had known almost every man in Europe, whose intercourse could strengthen, or enrich, or polish the mind. His own literature was various and elegant. In classical erudition, which by the custom of England is more peculiarly called learning, he was inferior to few professed scholars. Like all men of genius, he delighted to take refuge in poetry, from the vulgarity and irritation

of business. His own verses were easy and pleasant, and might have claimed no low place among those which the French call *vers de société*. The poetical character of his mind was displayed by his extraordinary partiality for the poetry of the two most poetical nations, or at least languages of the west, those of the Greeks and of the Italians. He disliked political conversation, and never willingly took any part in it.

“To speak of him justly as an orator, would require a long essay. Every where natural, he carried into public something of that simple and negligent exterior which belonged to him in private. When he began to speak, a common observer might have thought him awkward; and even a consummate judge could only have been struck with the exquisite justness of his ideas, and the transparent simplicity of his manners. But no sooner had he spoken for some time, than he was changed into another being. He forgot himself and every thing around him. He thought only of his subject. His genius warmed and kindled as he went on. He darted fire into his audience. Torrents of impetuous and irresistible eloquence swept along their feelings and conviction. He certainly possessed above all moderns that union of reason, simplicity, and vehemence, which formed the prince of orators. He was the most Demosthenean speaker since the days of Demosthenes. ‘I knew him,’ says Mr. Burke, in a pamphlet written after their unhappy difference, ‘when he was nineteen; since which time he has risen, by slow degrees, to be the most brilliant and accomplished debater the world ever saw.’

“The quiet dignity of a mind roused only by great objects, the absence of petty bustle, the contempt of show, the abhorrence of intrigue, the plainness and downrightness, and the thorough good nature which distinguished Mr. Fox, seem to render him no unfit representative of the old English character, which if it ever changed, we should be sanguine indeed to expect to see it succeeded by a better. The simplicity of his character inspired confidence, the ardour of his eloquence roused enthusiasm, and the gentleness of his manners invited friendship. ‘I admired,’ says Mr. Gibbon, after describing a day passed with him at Lausanne, ‘the powers of a superior man, as they are blended, in his attractive character, with all the softness and simplicity of a child: no human being was ever more free from any taint of malignity, vanity, or falsehood.’

“The measures which he supported or opposed may divide the opinion of posterity, as they have divided those of the present age. But he will most certainly command the unanimous reverence of future

generations, by his pure sentiments towards the commonwealth ; by his zeal for the civil and religious rights of all men ; by his liberal principles, favourable to mild government, to the unfettered exercise of the human faculties, and the progressive civilization of mankind ; by his ardent love for a country, of which the well-being and greatness were, indeed, inseparable from his own glory ; and by his profound reverence for that free constitution which he was universally admitted to understand better than any other man of his age, both in an exactly legal and in a comprehensively philosophical sense."



1. 1. The first part of the document is a list of the names of the persons who were present at the meeting.



Engraved by R. Wootton del.

BOSSUET.

*From the original Picture by P. L. Leysland,  
in the Collection of the Institute of France.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

London: Printed by Charles Knight, Pall Mall East.









THE life of the Bishop of Meaux, a theologian and polemic familiarly known to his countrymen as the oracle of their church, forms an important part of the ecclesiastical history of the seventeenth century. A short personal memoir of such a man can serve only to excite curiosity, and in some measure to direct more extended inquiries.

Jacques-Benigne Bossuet, whose father and ancestors were honourably distinguished in the profession of the law, was born at Dijon, September 27, 1627. He was placed in his childhood at the college of the Jesuits in his native town; whence, at the age of fifteen, he was removed to the college of Navarre in Paris. At both these places his progress as a student was so rapid that he passed for a prodigy. It may be mentioned, not more as a proof of precocious intellect than as characteristic of the times, that soon after his removal to Paris, whither the fame of his genius had preceded him, he was invited to exhibit his powers as a preacher at the Hotel de Rambouillet in his sixteenth year. His performance was received with great approbation.

In the year 1652 he was ordained priest, and, his talents having already made him known, he soon after received preferment in the cathedral church of Metz, of which he became successively canon, archdeacon, and dean. It was here that he published his *Refutation of the Catechism of Paul Ferri*, a protestant divine of high reputation. This was the first of that series of controversial writings which contributed, more than all his other works, to procure for him the high authority which he enjoyed in the church. He came forward in the field of controversy at a time when public attention was fixed on the subject, and when the favourite object both with Church and State was the peaceable conversion of the Protestants.

Richelieu in the preceding reign had crushed, by the vigour of his administration, the political power of the Protestant party. He, in common with many other statesmen, Catholic and Protestant, had conceived a notion that uniformity of religious profession was necessary to the tranquillity of the state. But, though unchecked in the prosecution of his objects by any scruples of conscience or feelings of humanity, he would have considered the employment of force, where persuasion could be effectual, to be, in the language of a modern politician, not a crime but a blunder. When therefore the army had done its work, he put in action a scheme for reclaiming the Protestants by every species of politic contrivance. The system commenced by him was continued by others ; and of all those who laboured in the cause, Bossuet was indubitably the most able and the most distinguished.

His first effort, the Refutation of the Catechism, recommended him to the notice of the Queen-Mother ; and the favour which he now enjoyed at court was further increased by the fame of his eloquence in the pulpit, which he had frequent opportunities of displaying at Paris, whither he was called from time to time by ecclesiastical business. He was summoned to preach at the chapel of the Louvre before Louis XIV., who was pleased to express, in a letter to Bossuet's father, the great delight which he received from the sermons of his son ; for the versatile taste of the great monarch enabled him in one hour to recreate himself with the wit and beauty of his mistresses, and in the next to listen with undiminished pleasure to the exhortations of a Christian pastor. But Bossuet had still stronger claims on the gratitude of Louis by converting to the Roman Catholic faith the celebrated Turenne. This victory is said to have been achieved by his well-known Exposition, written in the year 1668, and published in 1671.

So great was his influence at this time, that he was requested by the Archbishop of Paris to interfere in one of those many disputes which the Papal decrees against the tenets of Jansenius occasioned. The nuns of Port-Royal, who were attached to the doctrine and discipline of the Jansenists, were required to subscribe the celebrated Formula, which selected for condemnation five propositions said to be contained in a certain huge work of Jansenius. Those excellent women modestly submitted, that they were ready to accept any doctrine propounded by the Church, and even to affix their names to the condemnation of the obnoxious propositions ; but that they could not assert that these propositions were to be found in a book which they had never seen. In this difficulty the assistance of Bossuet was

requested; who, after several conferences, wrote a long letter to the refractory nuns, highly commended for its acute logic and sound divinity. Much of the logic and divinity was probably thrown away upon the persons for whose use they were intended; but there was one part of the letter sufficiently intelligible. He congratulated them on their total exemption from all obligation to examine, and from the task of self-guidance; and assured them that it was their bounden duty, as well as their happy privilege, to subscribe and assent to every thing which was placed before them by authority. The nuns were not convinced. They escaped however for the present; but in the end they paid dearly for their passive resistance to the decision of Pope Alexander VII. on a matter of fact.

In the year 1669, Bossuet was promoted to the bishopric of Condom, which he resigned the following year on being appointed to the important office of Preceptor to the Dauphin.

History has told us nothing of the pupil, but that his capacity was mean, and his disposition sordid. To him, however, the world is indebted for the most celebrated of Bossuet's performances. The *Introduction to Universal History* was written expressly for his use; and this masterly work may serve to confirm an opinion, entertained even by his friends, that Bossuet was not peculiarly qualified for his situation. To compose such a work for such a boy was worse than a waste of power.

Though devoted closely and conscientiously to the duties of his new office, he was not altogether withdrawn from what might be called his vocation, the prosecution of controversy. It was during the period of his connexion with the Court, that his celebrated conference occurred with the Protestant Claude. Mlle. de Duras, a niece of Turenne, had conceived scruples respecting the soundness of her Protestant principles, from the perusal of Bossuet's 'Exposition.' She consulted M. Claude, who promised to resolve her doubts in the presence of Bossuet himself. The challenge was accepted, and the memorable conference was the result. Both parties published an account of it; and their statements, as might be expected without suspicion of dishonesty on either side, did not entirely agree. The lady was content to follow the example of her uncle.

Bossuet's engagement with the Dauphin was concluded in the year 1681, when he was rewarded with the bishopric of Meaux. In so short a memoir of such a man, where only the most prominent occurrences of his life can be noticed, there is danger lest the reader should regard him only in the character of a controversialist, or in the proud station of

acknowledged leader of the Church. It is the more necessary, therefore, in this place to observe, that, to ~~the~~ comparatively obscure but really important duties of his diocese, he brought the same zeal and energy which he displayed on a more conspicuous theatre; and that he could readily exchange the pen of the polemic for that of the devout and affectionate pastor.

Louis, however, was not disposed to leave the Bishop undisturbed in his retirement. He was soon called forth to be the advocate of his temporal against his spiritual master.

The Kings of France had long exercised certain powers in ecclesiastical matters, which had rather been tolerated than sanctioned by the Popes. Louis was determined not only to preserve, but considerably to extend, what his predecessors had enjoyed. Hence a sharp altercation was carried on for many years between him and the See of Rome. But, in 1682, in consequence of a threatening brief issued by that haughty pontiff, Innocent XII., he summoned, by the advice of his clergy, for the purpose of settling the matters in debate, a general Assembly of the Church. Of this famous Assembly Bossuet was deservedly regarded as the most influential member. He opened the proceedings with a sermon, having reference to the subjects which were to come under consideration. In this discourse the reader may find, perhaps, some marks of that embarrassment which he is supposed to have felt. He had the deepest sense of the unbounded power and awful majesty of kings in general, and the highest personal veneration for Louis in particular; but then, on the other hand, the degree of allegiance which he owed to his spiritual head it was almost impiety to define. So, after having illustrated, with all the force of his eloquence, the inviolable dignity of the Church, and fully established the supremacy of St. Peter, he carries up, as it were in a parallel line, the loftiest panegyric on the monarchy and monarchs of France.

The discourse was celebrated for its ability, and without doubt the conflicting topics were managed with great skill. His difficulties did not cease with the dismissal of the Assembly. The question of the Régale, or the right of the King to the revenues of every vacant see, and to collate to the simple benefices within its jurisdiction, was settled not at all to the satisfaction of the Pope; and the declaration of the Assembly, drawn up by Bossuet himself, was fiercely attacked by the Transalpine divines. It was, of course, as vigorously defended by its author, who was in consequence accused by all his enemies, and some of his friends, of having forgotten his duty to the Pope in his subserviency to the King.

Nothing wearied by his exertions in the royal cause, he had scarcely left the Assembly, when he resumed his labours in defence of the Church against heresy. Several smaller works, put forth from time to time, seemed to be only a preparation for his great effort in the year 1688, when he published his 'History of the Variations in the Protestant Churches.' In this book he has made the most of what may be called the staple argument of the Catholics against the Protestants.

The course of the narrative has now brought us beyond the period of the memorable revocation of the Edict of Nantes; and it will naturally be asked, in what light Bossuet regarded this act of folly and oppression. Neither his disposition nor his judgment would lead him to approve the atrocities perpetrated by the government; but, in a letter to the Intendant of Languedoc, he labours to justify the use of pains and penalties in enforcing religious conformity; that is, he justifies the act of Louis XIV. In this matter he was not advanced beyond his times; but, whatever may have been his theory of the lawfulness of persecution, his conduct towards the Protestants was such as to obtain for him the praise even of his opponents.

Hitherto we have seen Bossuet labouring incessantly to reconcile the Huguenots of France to the established religion. But, about this time, he took part in a more grand and comprehensive measure, sanctioned by the Emperor, and some other sovereign princes of Germany, for the reunion of the great body of the Lutherans throughout Europe with the Roman Catholic Church. They engaged the Bishop of Neustadt to open a communication with Molanus, a Protestant doctor of high reputation in Hanover. With these negotiators were afterwards joined Leibnitz on the part of the Protestants, and Bossuet on that of the Roman Catholics. Between these two great men the correspondence was carried on for ten years, in a spirit worthy of themselves and the cause in which they were engaged; and it terminated, as probably they both expected that it would terminate, in leaving the two Churches in the same state of separation in which it found them.

It would have been well for the fame of Bossuet if the course of his latter days had been marked only by this defeat,—if it had not been signalized, when grey hairs had increased the veneration which his genius and services had procured him, by an inglorious victory over a weak woman, and a friend. The history of Madame Guyon, and the revival of mysticism under the name of Quietism, principally by her means, will more properly be found in a Life of Fenelon. The

part which Bossuet took in the proceedings respecting her must be here very briefly noticed. As universal referee in matters of religion, he was called upon to examine her doctrines, which began to excite the jealousy of the Church. His conduct towards her, in the first instance, was mild and forbearing; but either zeal or anger betrayed him at length into a cruel persecution of this amiable visionary. Fenelon, who had partly adopted her views of Christian perfection, and thoroughly admired her Christian character, was required by Bossuet to surrender to him at once his opinions and his feelings. Fenelon was willing to do much, but would not consent to sacrifice his integrity to the offended pride of the irritated prelate. He defended his opinions in print, and the points in debate were, by his desire, referred to the Pope; and to him they should in common decency have been left: but we are disgusted with a detail of miserable intrigues, carried on in the council appointed by the Pope to examine the matter, and of vehement remonstrances with which his holiness himself was assailed, with the avowed object of extorting a reluctant condemnation. The warmest friends of Bossuet do not attempt to defend him on the plea that these things were done without his concurrence; they insist only on his disinterested zeal for religion. But let it be remembered, that this interference with Papal deliberation proceeded from one who believed the Vicar of Christ to be solemnly deciding, with the aid of the Holy Spirit, a point of faith for the benefit of the whole Catholic Church. Bossuet triumphed; and from that moment sunk perceptibly in the general esteem of his countrymen.

During the few remaining years of his life he maintained his wonted activity, and in his last illness we find with pleasure that the Bible was his companion, and that he could employ his intervals of repose from severe suffering in composing a commentary on the 23d psalm. He died April 12, 1704, in his 76th year.

The authority which Bossuet acquired was such, that he may be said not only to have guided the Gallican Church during his life, but in some measure to have left upon it the permanent impression of his own character. Of this authority no adequate notion can be formed from the preceding sketch. Few even of his works, which fill twenty volumes quarto, have been noticed. It should, however, be mentioned that he was employed by Louis XIV. in an attempt to overcome the religious scruples of James II., whose conscience revolted from that exercise of the prerogative in favour of the Protestant Church, which his restoration to the throne would have required. The laboured and



somewhat extraordinary letter which Bossuet wrote on this occasion is dated May 22, 1693.

His countrymen claim for Bossuet an exalted place among historians, orators, and theologians. The honours bestowed by them on his 'Introduction to Universal History' have been confirmed by more impartial judges; and, even when unsupported by reference to the age in which it was written, it stands forth on its own merits as a noble effort of a comprehensive and penetrating mind. His Funeral Orations come to us recommended by the judgment of Voltaire, who ascribes to Bossuet alone, of all his contemporaries, the praise of real eloquence. The English reader will often be rewarded by passages, which in oratorical power have seldom been surpassed, and which may induce him to forgive much that is cold, inflated, and unnatural. But the Orations must be considered also as Christian discourses delivered by a minister of the Gospel from a Christian pulpit. They were composed, for the most part, to grace the obsequies of royal persons, and are, in fact, dedicated to the honour and glory of kings and princes. A text from Scripture is the peg on which is hung every thing which can minister to human pride, and dignify the vanities of a court; and the effect is but slightly impaired by well-turned phrases, proper to the occasion, on the nothingness of earthly things. But the orator is not content with general declamation, with prostrating himself before his magnificent visions of ancient pedigrees;—he descends to the meanest personal flattery of the living and the dead. When the Duchess of Orleans was laid in her coffin, her friends might hope that her frailties would be buried with her; but they could hardly expect that a Christian monitor should hold her forth as an exquisite specimen of female excellence, the glory of France, whom Heaven itself had rescued from her enemies to present as a precious and inestimable gift to the French nation. But on this occasion Bossuet was not yet perfect in his art, or the subject was not sufficiently disgraceful to draw forth all his powers. When afterwards called to speak over the dead body of the Queen, whose heart had withered under the wrongs which a licentious husband, amidst external respect, had heaped upon her, he finds it a fitting opportunity to pronounce at the same time a panegyric on the King. He recounts the victories won by the French arms, and ascribes them all to the prowess of his hero. But Louis is not only the taker of cities, he is the conqueror of himself; and the royal sensualist is praised for the government of his passions, the despot for his clemency and justice, and the grasping conqueror for his moderation.

The controversial writings of Bossuet deserve more regard than either his History or his Orations, if the importance of a book is to be measured by the extent and permanency of its effects. The Exposition of the Doctrines of the Roman Catholic Church, one of the shortest, but perhaps the most notable, of his theological works, was published under circumstances which gave occasion to a story of mysterious suppression and alteration. But a more serious charge has been brought against the author, of having deliberately misrepresented the doctrines of his Church, in order to entrap the Protestants. So grave an accusation ought not to be lightly entertained ; and though suspicion is excited by symptoms of disingenuous management in the controversy, to which the publication gave birth ; and though it appears to be demonstrable that the Roman Catholic religion, as commonly professed, and that many of its doctrines, as expressed or implied in some of its authorised formularies, differ essentially from the picture which Bossuet has drawn, yet it should at least be remembered that the book itself was eventually, though tardily, sanctioned by the highest authority in the Church. It is possible that Bossuet may by his Exposition have converted many beside Turenne ; but there can be no doubt that he has wrought an extensive, though a less obvious, change within the bosom of his own Church. The high authority of his name would give currency to his opinions on any subject connected with religion ; and many sincere Roman Catholics, who had felt the objections urged against certain practices and dogmas of their own Church, would rejoice to find, on the authority of Bossuet, that they were not obliged to own them.

The charge of insincerity has been extended beyond the particular instance to the general character of the Bishop ; and it has been asserted that he held, in secret, opinions inconsistent with those which he publicly professed. This charge, which is destitute of all proof, seems to have been the joint invention of over-zealous Protestants and pretended philosophers.

Enough has been shown to justify us in supposing that he was not one of those rare characters which can break loose from all the obstacles that oppose themselves to the simple love and uncompromising search of truth. Some men, like his illustrious countryman Du Pin, struggle to be free. It should seem that Bossuet, if circumstances fettered him, would not be conscious of his thralldom ; that he would exert all the energies of his powerful mind, not to escape from his prison, but to render it a tenable fortress, or a commodious dwelling. It would be foolish and unjust to infer from this that he would

persevere through life in deliberately maintaining what he had discovered to be false, on the most momentous of all subjects.

A complete catalogue of his works may be found at the end of the *Life of Bossuet* in the *Biographie Universelle*. The *Life* itself, which is obviously written by a partial friend, contains much information in a small compass. The affair of Quietism, and the contest between Bossuet and Fenelon, are minutely detailed with great accuracy in the *Life of Fenelon* by the Cardinal de Bausset, whose impartiality seems to have been secured by the profound veneration which he entertained for each of the combatants, though the impression left on the reader's mind is not favourable to the character of Bossuet.





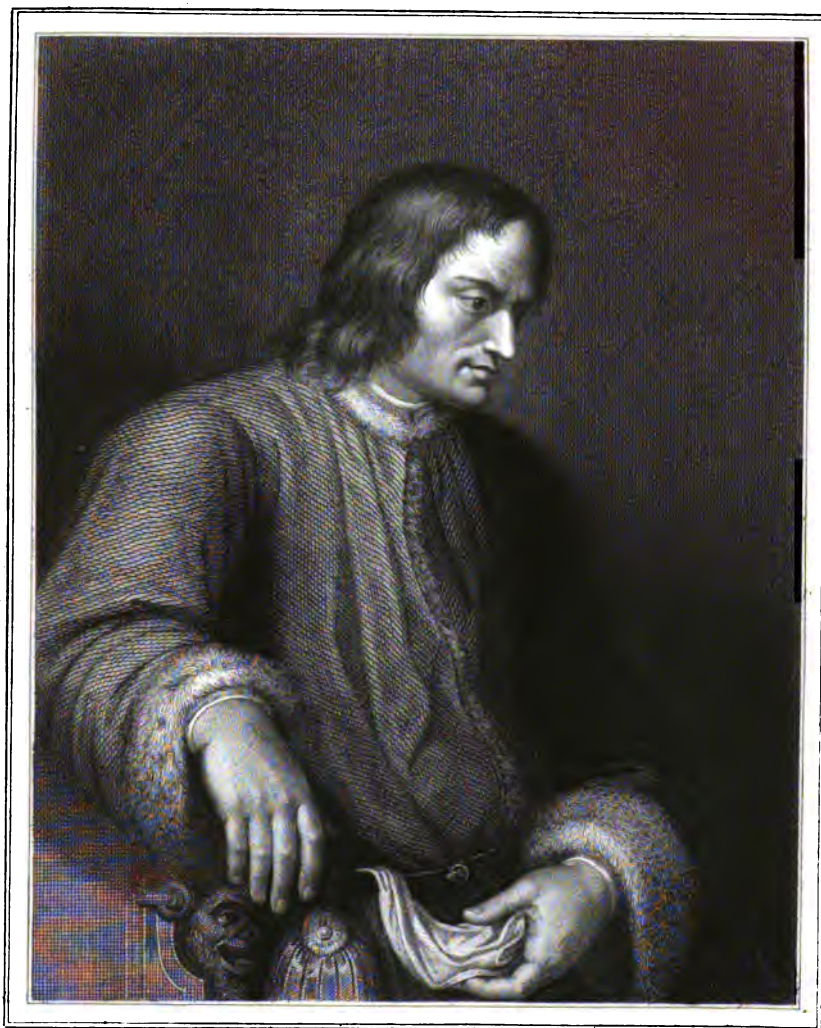
AMONG the genealogists who wasted their ingenuity to fabricate an imposing pedigree for Lorenzo de Medici, some pretended to derive his origin from the paladins of Charlemagne, and others to trace it to the eleventh century. But it is well ascertained that his ancestors only emerged from the inferior orders of the people of Florence in the course of the fourteenth century, when, by engaging in great commercial speculations, and by signalizing themselves as partisans of the populace of that republic, they speedily acquired considerable wealth and political importance.

Giovanni di Bicci, his great grandfather, may be regarded as the first illustrious personage of the family, and as the author of that crafty system of policy, mainly founded on affability and liberality, by which his posterity sprung rapidly to overwhelming greatness. By an assiduous application to trade he made vast additions to his paternal inheritance; by flattering the passions of the lowest classes he obtained the highest dignities in the state. He died in 1428, deeply regretted by his party, and leaving two sons, Cosmo and Lorenzo, from the latter of whom descended the Grand Dukes of Tuscany.

Cosmo was nearly forty when he succeeded to the riches and popularity of his father; and he had not only conducted for several years a commercial establishment which held counting-houses in all the principal cities of Europe and in the Levant, but had also participated in the weightier concerns of government. The form of the Florentine constitution was then democratical: the nobility had been long excluded from the administration of the republic; and the citizens, though divided into twenty-one guilds, or corporations of arts and trades, from seven of which alone the magistracy were chosen, had, however, an equal share in the nomination of the magistrates, who were changed every two months. The lower corporations, owing principally to the manoeuvres of Salvestro de Medici, had risen in 1378 against the higher, demanding a still more complete equality, and had taken the direction of the commonwealth into their own hands; but after having raised a carder of wool to the supreme







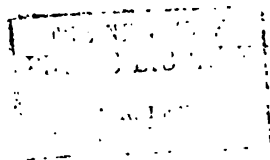
Engraved by G.E. Kneller.

LORENZO DE' MEDICI.

*From a Portrait by Raffaello Allighieri,  
after an Engraving by G. Vasari.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge.

London: Published by Charles Knight, Pall Mall East.





power, and involved themselves in the evils of anarchy, convinced at last of their own incapacity, they had again submitted to the wiser guidance of that kind of burgher-aristocracy which they had subverted; and that party, headed by the Albizzi and some other families of distinction, had, ever since 1382, governed the state with unexampled happiness and glory. The republic had been aggrandized by the important acquisition of Leghorn, Pisa, Arezzo, and other Tuscan cities; its agriculture was in the most prosperous condition; its commerce had received a prodigious development; its decided superiority in the cultivation of literature, the sciences, and the arts, had placed it foremost in the career of European civilization; and its generous but wise external policy had constituted it as the guardian of the liberties of Italy.

To this beneficent administration the aspiring Cosmo had long offered a troublesome opposition; and he now succeeded in ensnaring it into a ruinous war with Lucca, by which he obtained the double object of destroying its popularity, and of employing considerable sums of money with unusual profit. But the reverses of the republic were attributed to a treasonable correspondence between him and the enemy, and in 1433 he was seized and condemned to ten years' banishment, having averted capital punishment by a timely bribe. The absence of a citizen who spent more than a great king in acts of piety, benevolence, and liberality, was, however, severely felt in the small city of Florence, and the intelligence of the honours he received everywhere in his exile raised him still more in public estimation. The number of his friends increased, indeed, so rapidly, that at the September elections in the following year they completely defeated the ruling party, and chose a set of magistrates by whom he was immediately recalled. This event, erroneously considered as a victory of the people over an aristocracy, was, properly speaking, a triumph of the populace over the more educated classes of the community, and it proved fatal to the republic. Placed by fame, wealth, and talent, at an immeasurable elevation above the obscure materials of his faction, from the moment of his return to that of his death, August, 1464, Cosmo exercised such an influence in the state, that, though he seldom filled any ostensible office, he governed it with absolute authority by means of persons wholly subservient to his will. But, under the pretence of maintaining peace and tranquillity, he superseded its free institutions by a junta invested with dictatorial power; he caused an alarming number of the most respectable citizens to be banished, ruined by confiscation, or even put to death, on the slightest suspicion that by their wealth or connexions they might oppose his schemes of ambition; and he laboured with indefatigable zeal to enslave his own confiding countrymen, not only

by spreading secret corruption at home, but also by changing the foreign policy of his predecessors, and helping his great friend, Francesco Sforza, and other usurpers, to crush the liberties of neighbouring states.

Cosmo is nevertheless entitled to the grateful recollections of posterity for the efficient patronage he afforded learning and the arts, though he evidently carried it to excess as a means of promoting his political designs. He was profuse of favours and pensions to all who cultivated literature or philosophy with success; he bought at enormous prices whatever manuscripts or masterpieces of art his agents could collect in Europe or Asia; he ornamented Florence and its environs with splendid palaces, churches, convents, and public libraries. He died in the seventy-fifth year of his age, just after a decree of the senate had honoured him with the title of Father of his country, which was subsequently inscribed on his tomb.

Lorenzo de Medici, the subject of the present memoir, was born at Florence on the 1st of January, 1448. His father was Piero, the son and successor of Cosmo: his mother, Lucretia Tornabuoni, a lady of some repute, both as a patroness of learning and as a poetess. He had scarcely left the nursery when he acquired the first rudiments of knowledge under the care and tuition of Gentile d'Urbino, afterwards Bishop of Arezzo. Cristoforo Landino was next engaged to direct his education; and Argyropylus taught him the Greek language and the Aristotelian philosophy, whilst Marsilio Ficino instilled into his youthful mind the precepts and doctrines of Plato. The rapidity of his proficiency was equal to the celebrity of his masters, and to the indications of talent that he had given in childhood. Piero, who was prevented by a precarious state of health from attending regularly to business, rejoiced at the prospect of soon having in his own son a strenuous and trusty coadjutor; and on the death of Cosmo, the domestic education of Lorenzo being completed, he sent him to visit the principal courts of Italy, in order to initiate him into political life, and to afford him an opportunity of forming such personal connexions as might advance the interests of the family. Piero pretended to succeed to Cosmo's authority, as if it had been a part of his patrimony; but the Florentine statesmen, who thought themselves superior to him in age, capacities, and public services, disdained to pay him the same deference they had shown the more eminent abilities of his father. Besides, Cosmo had taken especial care to conciliate the esteem and affection of his countrymen. He had never refused gifts, loans, or credit to any of the citizens, and never raised his manners or his domestic establishment above the simplicity of common life. But Piero seemed to have no regard for the feelings of others: he ruined

several merchants by attempting to withdraw considerable capital from commerce ; he allowed his subordinate agents to make a most profligate and corrupt monopoly of government ; and he shocked the republican notions of his countrymen by seeking to marry Lorenzo into a princely family. These causes of discontent arrayed against him a formidable party, under the direction of Agnolo Acciajuoli, Niccolo Soderini, and Luca Pitti, the founder of the magnificent palace, now the residence of the Grand Duke of Tuscany. A parliament of the people rejected Piero's proposition of re-appointing the dictatorial junta, whose power expired in September, 1465. His cause was evidently lost, had his enemies continued firmly united ; but the defection of the unprincipled Luca Pitti enabled him to recover his authority, which he soon secured by banishing his opponents, and by investing five of his dependants with the right of choosing the magistracy. Lorenzo is said on this occasion to have been of great assistance to his father ; and a letter of Ferdinand, King of Naples, is still extant, in which that perfidious monarch congratulates him on the active part he had taken in the triumph, and in the consequent curtailment of popular rights.

The populace of Florence were now entertained with splendid festivals, and with two tournaments, in which Lorenzo and his brother Giuliano bore away the prizes. These tournaments form an epoch in the history of literature ; the victory of Lorenzo having been commemorated by the verses of Luca Pulci, and that of Giuliano, by a poem of Politian, which restored Italian poetry to its former splendour. About this period, 1468, Lorenzo became enamoured, or rather fancied himself enamoured, of a lady whom he described as prodigiously endowed with all the charms of her sex, and he strove to immortalize his love in song. But, whether real or supposed, his passion did not prevent him from marrying Clarice Orsini, of the famous Roman family of that name. The nuptials were celebrated on the 4th of June, 1469, on a scale of royal magnificence.

The death of Piero, which happened about the end of the same year, was not followed by any interruption of public tranquillity. The republicans were now either old or in exile ; the rising generation grew up with principles of obedience to the Medici ; and Lorenzo was easily acknowledged as the chief of the state. An attempt at revolution was made a few months afterwards at Prato, by Bernardo Nardi and some other Florentine exiles ; but the complete inertness of the inhabitants rendered it unsuccessful. Nardi and six of his accomplices were executed at Florence ; the remainder at Prato. Surrounded by a host of poets, philosophers, and artists, Lorenzo, however, left the republic under the misgovernment of its former rulers, whilst he gave himself

up to the avocations of youth, and indulged an extraordinary taste for pompous shows and effeminate indulgence, which had a most pernicious influence on the morals of his fellow-citizens. The ostentatious visit which his infamous friend Galeazzo Sforza paid him in 1471, with a court sadly celebrated for its corruption and profligacy, is lamented by historians as one of the greatest disasters that befel the republic.

Lorenzo went soon afterwards on a deputation to Rome, for the purpose of congratulating Sixtus IV. on his elevation to the papal chair. He met with the kindest reception; was made treasurer of the Holy See, and honoured with other favours; but he could not obtain a cardinal's hat for his brother Giuliano. Accustomed to have his wishes readily gratified, he could not brook the refusal, and he sought his revenge in constantly thwarting the Pope in his politics, whether they tended to the advancement of his nephews, or to the liberty and independence of Italy. A disagreement, which arose in 1472, between the city of Volterra and the republic of Florence, afforded another instance of the peremptoriness of his character. He, at first, made some endeavours to convince the inhabitants of Volterra of their imprudence; but finding that the exasperated citizens rejected his advice, he prevailed on the Florentine government to repress them by force, though his uncle Tomaso Soderini and other statesmen of more experience strongly recommended conciliatory measures. An army was accordingly sent under the command of the Count of Urbino, which, after obtaining admission into the unfortunate city by capitulation, despoiled and plundered its inhabitants for a whole day.

Though, on his first succeeding to his father, Lorenzo did not attempt to exercise the sovereign authority in person, he assumed it by degrees, in proportion as he advanced in manhood; and he even became so jealous of all those from whom any rivalry might be feared, that he depressed them to the utmost of his power. His brother, less ambitious and less arrogant than himself, tried to stop him in his tyrannical career; but Giuliano was five years younger: his representations had no effect; and these vexatious proceedings gave origin to the conspiracy of the Pazzi. The parties engaged in this famous attempt were several members of the distinguished family of the Pazzi, whom Lorenzo had injured in their interests as well as in their feelings; Girolamo Riario, a nephew of the Pope, whose hatred he had excited by continual opposition to his designs; Francesco Salviati, Archbishop of Pisa, whom he had prevented from taking possession of his see; and several other individuals of inferior note, who were either moved by private or public wrongs. After vain endeavours to seize the two brothers together, the conspirators resolved to execute their enterprize in the cathedral of Florence, on the 26th

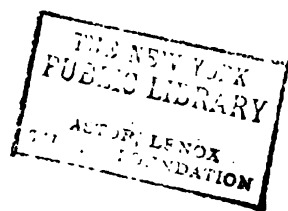
of April, 1478, in the course of a religious ceremony at which they were both to be present. At the moment that the priest raised the host, and all the congregation bowed down their heads, Giuliano fell under the dagger of Bernardo Bandini, whilst Lorenzo was so fortunate as to escape, and shut himself up in the sacristy until his friends came to his assistance. A simultaneous attack on the palace of government failed of success, and the Archbishop Salviati, who had directed it, was hung out of the palace windows in his prelatical robes. All those who were implicated in the conspiracy, or connected in any way with the conspirators, were immediately put to death. Lorenzo exerted all his influence to obtain those who had taken refuge abroad ; and his wrath was not appeased until the blood of two hundred citizens was shed. The Pope pronounced a sentence of excommunication against him and the chief magistrates for having hanged an archbishop ; and sent a crusade of almost all Italy against the republic, requiring that its leaders should be given up to suffer for their scandalous misdemeanour. The superior forces of the enemy ravaged the Florentine territory with impunity : the people began to murmur against a war in which they were involved for the sake of an individual ; and Lorenzo could not but see that his situation became every day more critical and alarming. But having been confidently apprized that Ferdinand was disposed to a reconciliation with him, he took the resolution of going to Naples, as ambassador of the republic, in the hope of detaching the King from the league, and of inducing him to negotiate a peace with the Pope. Through his eloquence and his gold, he was successful in his mission ; and after three months' absence, at the beginning of March, 1480, he returned to Florence, where he was received with the greatest applause and exultation by the populace, to whom the dangers incurred by him in his embassy had been artfully exaggerated.

This ebullition of popular favour encouraged Lorenzo to complete the consolidation of his power by fresh encroachments on the rights of his countrymen. In 1481 another plot was formed against him ; but his watchful agents discovered it, and Battista Frescobaldi, with two of his accomplices, were hanged. Tranquil and secure at home, as well as peaceful and respected abroad, he now diverted his mind from public business to literary leisure, and spent his time in the society of men of talent, in philosophical studies, and in poetical composition. But his rational enjoyments had a short duration. Early in 1492 he was attacked by a slow fever, which, combined with his hereditary complaints, warned him of his approaching end. Having sent to request the attendance of the famous Savonarola, to whom he was desirous of making his confession, the austere Dominican readily com-

plied with his wish, but declared he could not absolve him unless he restored to his fellow-citizens the rights of which he had despoiled them. To such a reparation Lorenzo would not consent; and he died without obtaining the absolution he had invoked. Piero, the eldest of his three sons, was deprived of the sovereignty in consequence of the reaction that the eloquent sermons of Savonarola produced in the morals of Florence. Giovanni, whom Innocent VIII., by a prostitution of ecclesiastical honours unprecedented in the annals of the church, had raised to the Cardinalship at the early age of thirteen, became Pope under the name of Leo X., and gave rise to the Reformation by his extreme profligacy and extravagance; and Giuliano, who afterwards allied himself by marriage to the royal House of France, was elevated to the dignity of Duke of Nemours.

Lorenzo de Medici has been extolled with immoderate applause as a poet, a patron of learning, and a statesman. His voluminous poetical compositions, embracing subjects of love, rural life, philosophy, religious enthusiasm, and coarse licentiousness, exhibit an uncommon versatility of genius, a rich imagination, and a remarkable purity of language; but in spite of the exaggerated eulogies lavished on them by his own flatterers and by those of his dependants, they never obtained any popularity, and are now nearly buried in oblivion. His efforts for the diffusion of knowledge and taste shine more conspicuous; in this laudable course he followed the traces of Cosmo and of his father. It is, however, impossible to conceive any strong reverence or respect for his memory without forgetting his political conduct, which is far from deserving any praise.







Engraved by E. Scriven

GEORGE BUCHANAN.

*From a Picture by Francis Verelst, 1620.  
in the possession of the Society.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge.

London, Published by Charles Knight, Pall Mall East.









**GEORGE BUCHANAN** was born in February, 1506, at a small village called Killearn, on the borders of Stirlingshire and Dumbartonshire. He came, as he says, "of a family more gentle and ancient than wealthy." His father dying, left a wife and eight children in a state of poverty. George, one of the youngest, was befriended, and, perhaps, saved from want and obscurity, by the kindness of his mother's brother, James Heriot, who had early remarked his nephew's talents, and determined to foster them by a good education. The ancient friendship between France and Scotland, cemented by their mutual hate of England, was then in full force. The Scotch respected the superiority of the French in manners, arts, and learning; and very commonly sent the wealthier and more promising of their youth to be educated by their more polished neighbours. Accordingly Buchanan, at the age of fourteen, was sent by his uncle to the University of Paris. Here he applied himself most diligently to the prescribed course of study, which consisted principally in a careful perusal of the best Latin authors, especially the poets. This kind of learning was peculiarly suited to his taste and genius; and he made such progress, as not only to become a sound scholar, but one of the most graceful Latin writers of modern times.

After having remained in Paris for the space of two years, which he must have employed to much better purpose than most youths of his age, the death of his kind uncle reduced him again to poverty. Partly on this account, partly from ill health, he returned to his own country, and spent a year at home. After having recruited his strength, he entered as a common soldier into a body of troops that was brought over from France by John Duke of Albany, then Regent

of Scotland, for the purpose of opposing the English. Buchanan himself says that he went into the army "to learn the art of war;" it is probable that his needy circumstances were of more weight than this reason. During this campaign he was subjected to great hardships from severe falls of snow; in consequence of which he relapsed into his former illness; and was obliged to return home a second time, where he was confined to his bed a great part of the winter. But on his recovery, in the spring of 1524, when he was just entering upon his 18th year, he again took to his studies, and pursued them with great ardour. He seems to have found friends at this time rich enough to send him to the University of St. Andrews, on which foundation he was entered as a *pauper*, a term which corresponds to the servitor and sizer of the English Universities. John Mair, better known (through Buchanan\*) by his Latinized name of Major, was then reading lectures at St. Andrews on grammar and logic. He soon heard of the superior accomplishments of the poor student, and immediately took him under his protection. Buchanan, notwithstanding his avowed contempt for his old tutor, must have imbibed from Major many of his opinions. He was of an ardent temper, and easy, as his contemporaries tell us, to lead whichever way his friends desired him to go; he was also of an inquiring disposition, and never could endure absurdities of any kind. This sort of mind must have found great delight in the doctrines which Major taught. He affirmed the superiority of general councils over the papacy, even to the depriving a Pope of his spiritual authority in case of misdeemeanour; he denied the lawfulness of the Pope's temporal sway; he held that tithes were an institution of mere human appointment, which might be dropped or changed at the pleasure of the people; he railed bitterly against the immoralities and abominations of the Romish priesthood. In political matters his creed coincides exactly with Buchanan's published opinions,—that the authority of kings was not of divine right, but was solely through the people, for the people; that by a lawful convention of states, any king, in case of tyranny or misgovernment, might be controlled, divested of his power, or capitally executed according to circumstances. But if Major, who was a weak man and a bad arguer, had such weight with Buchanan, John Knox, the celebrated Scottish reformer, who was a fellow-student with him at

\* See his epigram. "In Johannem solo cognomento Majorem ut ipse in fronte libri scripsit."

Cum scateat nugis solo cognomine Major,  
Nec sit in immenso pagina sana libro;  
Non minem titulis quod se veracibus ornet;  
Nec semper mendax fingere Creta solet.

The book was "ane most fulish tractate on ane most emptie subject."

St. Andrews, must have had still more. They began a strict friendship at this place, which only ended with their lives. Knox speaks very highly of him at a late period of his own life: "That notabil man, Mr. George Bucquhanane, remainis alyve to this day, in the yeir of God 1566 yeares, to the glory of God, to the gret honor of this natioun, and to the comfort of thame that delyte in letters and vertew. That singular work of David's Psalmes, in Latin meetere and poesie, besyd many uther, can witness the rare graices of God gevin to that man." These two men speedily discovered the absurdity of the art of logic, as it was then taught. Buchanan tells us that its *proper* name was the art of sophistry. Their mutual longings for better reasonings, and better thoughts to reason upon, produced great effects in the reformation of their native country.

After Buchanan had finished his studies at St. Andrews, and taken the degree of Bachelor of Arts, he accompanied Major to Paris, where his attention was more seriously turned towards the doctrines of the reformation, which at that time were eagerly and warmly discussed; but whether from fear of the consequences, or from other motives, he did not then declare himself to be a Lutheran. For five years he remained abroad, sometimes employed, sometimes in considerable want; at the end of which time he returned to Scotland with the Earl of Cassilis, by whom he had been engaged as a travelling companion. His noble patron introduced him at the court of James V. the father of Mary Stuart. James retained him as tutor to his natural son, James Stuart, afterwards Abbot of Kelso. It has been proved that he was *not* tutor to the King's other natural son, James Stuart, afterwards Earl of Murray and Regent of Scotland, whose first title was Prior of St. Andrews.

While he was at court, having a good deal of leisure, he amused himself with writing a pretty severe satire on the monks, to which he gives the name of "Somnium." He feigns in this piece that Saint Francis d'Assize had appeared to him in a dream, and besought him to become a monk of his order. The poet answers, "that he is nowise fit for the purpose; because he could not find in his heart to become slavish, impudent, deceitful, or beggarly, and that moreover very few monks had the good fortune, as he understood, to reach even the gates of paradise." This short satire was too well written, and too bitter, to pass unnoticed, and the sufferers laid their complaint before the king: but as Buchanan's name had not been put to it, they had no proof against him, and the matter dropped. Soon after the Franciscans fell into disgrace at Court; and James himself instigated the poet to

renew the attack. He obeyed, but did not half satisfy the King's anger in the light and playful piece which he produced. On a second command to be still more severe, he produced his famous satire 'Franciscanus,' in which he brings all his powers of wit and poetry to bear upon the unfortunate brotherhood. The argument of the poem is as follows:—he supposes that a friend of his is earnestly desirous to become a Cordelier, upon which he tells him that he also had had a similar intention, but had been dissuaded from it by a third person, whose reasons he proceeds to relate. They turn upon the wretched morals and conduct of those who belonged to the order, as exhibited in the abominable lessons which he puts in the mouth of an ancient monk, the instructor of the novices. He does not give this man the character of a rough and ignorant priest, but makes him tell his tale cleverly, giving free vent to every refinement in evil which the age was acquainted with, and speaking the most home truths of his brethren without fear or scruple. The Latin is pure, and free from the barbarisms of the time.

After such a caustic production, it is no wonder that the party assailed made use of every means to destroy its author. The King, who was a weak and variable man, after much importunity on their part, allowed them to have Buchanan arrested in the year 1539, on the plea of heresy, along with many others who held his opinions about the state of the Scottish church. Cardinal Beatoun, above all others, used his best endeavours to procure sentence against him; he even bribed the King to effect his purpose. But Buchanan's friends gave him timely warning of the prelate's exertions, and, as he was not very carefully guarded, he made his escape out of the window of his prison, and fled to England. He found, however, that England was no safe place for him, for at that time Henry VIII. was burning, on the same day and at the same stake, both protestant and papist, with the most unflinching impartiality. He went over, therefore, for the third time into France; but on his arrival at Paris, finding his old enemy the Cardinal Beatoun ambassador at the French court, and being fearful that means might be taken to have him arrested, he closed with the offer of a learned Portuguese, Andrea di Govea, to become a tutor at the new college at Bourdeaux. During his residence there he composed his famous Latin Tragedies, 'Jephthes' and 'Joannes Baptistes,' and translated the Medea and Alcestis of Euripides into Latin metre, for the youth of his college. The two latter show that his acquaintance with the Greek language was by no means superficial.

After holding this situation for about three years, Buchanan went

with Govea, at the instance of the King of Portugal, to a lately established school at Coimbra. Before he ventured into Portugal, however, he took care to let the King know that his Franciscanus was undertaken at the command of his sovereign, and therefore ought nowise to endanger his safety in Portugal. The King promised him his protection. But he had not been at Coimbra long, before he was accused by the monks of heresy, and the King, forgetting his promise, allowed them to keep Buchanan prisoner in a convent, as they declared, for the purpose of reclaiming him. They gave him as a penance the task of translating the Psalms of David from the Vulgate into Latin verse. This he accomplished to admiration; and his production is acknowledged to surpass all works of the like sort. The metres are chiefly lyrical. He was soon after dismissed from prison, and took ship for England, and staying there but a short time, he returned again to France. Here the Marechal de Brissac intrusted him with the education of his son Timoleon de Cossé. While thus employed he studied, more particularly than he had hitherto done, the controversies of the day with regard to religion, and became most probably a confirmed protestant, though he did not openly renounce catholicism till some time afterwards. He wrote, and dedicated to his pupil, a much admired piece, entitled '*Sphœra*,' during his tutorship. In the year 1560 he returned again to Scotland, the reformed religion being then prevalent there, and became publicly a member of the Protestant Kirk.

The most important, because the most public part of Buchanan's life now begins. Such a man could not long remain unnoticed by the great in Scotland, and Mary Stuart herself became one of his best friends. He had written for her two epithalamia, one on her marriage with the Dauphin, and one on her marriage with Lord Darnley. Her respect for his abilities was very great, and she had him appointed tutor to her son a month after he was born, in the year 1566.

It is a matter of no small wonder, that Buchanan, who was James's most influential tutor, for the three others, who were joined in the commission with him, were under his superintendence, should have educated him as he did, or made him what he was. A book which Buchanan published, and which is among the most famous of his works, '*De jure Regni apud Scotos*,' being a conversation between himself and Maitland the Queen's secretary, contains (though dedicated to his royal pupil) sentiments totally at variance with all the notions of James. In it Buchanan follows the ancient models of what was thought a perfect state of policy. He proves that men were born to live socially,—that they elected kings to protect the laws which bind

them together,—that if new laws are made by kings, they must be also subjected to the opinion of the states of the nation,—that a king is the father of his people for good, not for evil,—that this was the original intention in the choice of Scottish kings,—that the crown is not necessarily hereditary, and that its transmission by natural descent but for its certainty is not defensible,—that a violation of the laws by the monarch may be punished even to the death, according to the enormity of it,—that when St. Paul talks of obedience to authorities he spoke to a low condition of persons, and to a minority in the various countries in which they were,—that it is not necessary that a king should be tried by his peers. He concludes by saying, “that if in other countries the people chose to exalt their kings above the laws, it seems to have been the evident intention of Scotland to make her kings inferior to them.” In matters of religion he rails against episcopal authority of all kinds. Now nothing can be more opposed than all this to the opinions of James, who most strongly upheld the divine right of kings, and episcopal authority. Buchanan, when he was accused of making James a pedant, declared it to be “because he was fit for nothing else.” He was a stern and unyielding master, and no sparer of the rod, even though applied to the back of royalty; and this may in some measure account for the want of influence which he had over the King’s mind. James advises his son, in his βασιλικὸν δῶρον not to attend to the abominable scandals of such men as Buchanan and Knox, “who are persons of seditious spirit, and all who hold their opinions.”

It might have been well, however, for the unfortunate Charles if he had been rather more swayed by the opinions of the tutor, and less by the lessons of the pupil. In the early part of Buchanan’s tutorship he attached himself strongly to the interests of the Regent, Murray; and as the patron fell off from the interests of Mary, so did the historian, till at last he became the bitterest of her enemies. He alone has ventured to assert in print his belief of her criminal connexion with David Rizzio, in his ‘*Detectio Mariæ Reginæ*,’ published in 1571; and he was her great accuser at the court of Elizabeth, when appointed one of the commissioners to inquire into Mary’s conduct, she being a prisoner in England. Buchanan too lies under the serious charge of having forged the controverted letters, supposed to have passed between Mary and her third husband Bothwell, while she was yet the wife of Earl Darnley, from which documents it was made to appear that she was art and part in the murder of her Royal Consort. Whether he really forged these letters or not, is a question perhaps too deeply buried



in the dust of antiquity to admit of proof. He offered to swear to their genuineness, however, which was an ill return, if that were all his fault, to the kindness he had received from her. His friendship for Murray continued firm all his life ; this man was one of the few persons he seems to have been really attached to. Through the Earl's interest, Buchanan was made keeper of the Scottish seals, and a Lord of Session. Nothing is told us of his abilities as a practical politician, but it may be supposed that he was fitted for the office he held, for Murray was very careful in the choice of his public servants.

Buchanan's last work, on which he spent the remaining fourteen years of his life, is yet to be spoken of,—his *History of Scotland*. In this, which like the rest of his productions was written in Latin, he has been said to unite the elegance of Livy with the brevity of Sallust. With this praise, however, and with that which is due to his lively and interesting way of relating a story, our commendations of this work must begin and end. As a history, it is valueless. The early part is a tissue of fable, without dates or authorities, as indeed he had none to give ; the latter is the work of an acrimonious and able partisan, not of a calm inquirer and observer of the times in which he lived. The work is divided into four books. The first three contain a long dissertation on the derivation of the name of Britain,—a geographical description of Scotland, with some poetical accounts of its ancient manners and customs,—a treatise on the ancient inhabitants of Britain, chiefly taken from the traditionary accounts of the bards, and the fables of the monks engrafted on them, on the vestiges of ancient religions, and on the resemblances of the various languages of different parts of the island. The real history of Scotland does not begin till the fourth book ; it consists of an account of a regular succession of one hundred and eight kings, from Fergus I. to James VI., a space extending from the beginning of the sixth century to the end of the sixteenth. The apocryphal nature of the greater part of these monarchs is now so fully admitted, that it is unnecessary to dilate upon them. Edward I. as is well known, destroyed all the genuine records of Scottish history which he could find. Buchanan, instead of rejecting the absurd traditionary tales of bards and monks, has merely laboured to dress up a creditable history for the honour of Scotland, and to "clothe with all the beauties and graces of fiction, those legends which formerly had only its wildness and extravagance."

This work, and his *De jure Regni apud Scotos*, he published at the same time, very shortly before his death ; and, while he was on his death-bed, the Scottish Parliament condemned them both as false and

sedition books. We may lay part of this condemnation to James's account. It is not probable that he would allow so much abuse of his mother as they contained, directly and indirectly, to pass without some public stigma. There remain to be noticed only two small pieces of this author in the Scottish language, one a grievous complaint to the Scottish peers, arising from the assassination of the Earl of Murray; the other, a severe satire against Secretary Maitland, for the readiness with which he changed from party to party: this has the title of 'Chameleon.'

Buchanan died at the good old age of seventy-four, in his dotage as his enemies said, but in full vigour of mind as his last great work, his History, has proved. Much has been said in his dispraise by enemies of every class, his chief detractors being the partisans of Mary Stuart and the Romish priesthood. The first of these accuse him of ingratitude to Major, Mary, Morton, Maitland, and to others of his benefactors; of forging the letters above-mentioned, and of perjury in offering to swear to them. The latter accuse him of licentiousness, of drunkenness, and falsehood; and one of them has descended so far as to quarrel with his personal ugliness. Of these charges many are, to say the least, unproved; many appear to be altogether untrue. But his fame rests rather on his persevering industry, his excellent scholarship, and his fine genius, than upon his moral qualities. Buchanan wrote his own life in Latin two years before his death. To this work, to Mackenzie's 'Lives and Characters of the most eminent writers of the Scots Nation,' to the *Biographia Britannica*, and the numerous authorities on insulated points there quoted, we may refer those who wish to pursue this subject. Buchanan's works were collected and edited by the grammarian Ruddiman, and printed by Freebairn, at Edinburgh, in the year 1715, in two volumes, folio.







*Engraved by J. Thompson.*

FÉNELON.

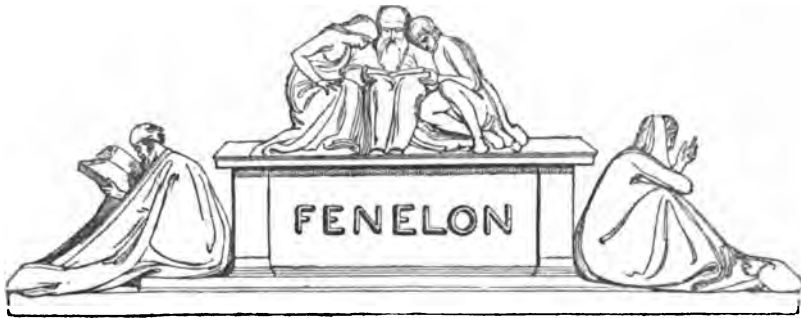
*From the original Picture by Vivien  
in the Collection at the Louvre.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

*London, Published by Charles Knight, Pall Mall East.*







**FRANCOIS DE SALIGNAC DE LAMOTHE-FENELON** was born August 6th, 1651, at the Castle of Fenelon, of a noble and ancient family in the province of Perigord.

Early proofs of talent and genius induced his uncle, the Marquis de Fenelon, a man of no ordinary merit, to take him under his immediate care and superintendence. By him he was placed at the seminary of St. Sulpice, then lately founded in Paris for the purpose of educating young men for the church.

The studies of the young Abbé were not encouraged by visions of a stall and a mitre. It seems that the object of his earliest ambition was, as a missionary, to carry the blessings of the Gospel to the savages of North America, or to the Mahometans and heretics of Greece and Anatolia. The fears, however, or the hopes of his friends detained him at home, and after his ordination he confined himself for several years to the duties of the ministry in the parish of St. Sulpice.

At the age of twenty-seven he was appointed superior of a society which had for its object the instruction and encouragement of female converts to the Church of Rome; and from this time he took up his abode with his uncle. In this house he first became known to Bossuet, by whose recommendation he was intrusted with the conduct of a mission, charged with the duty of reclaiming the Protestants in the province of Poitou, in the memorable year 1685, when the Huguenots were writhing under the infliction of the dragonade, employed by the government to give full effect to the revocation of the edict of Nantes. Fenelon had no mind to have dragoons for his coadjutors, and requested that all show of martial terror might be removed from the places which he visited. His future proceedings were in strict conformity with this gentle commencement, and consequently exposed him to the harassing remonstrances of his superiors.

His services in Poitou were not acknowledged by any reward from the government, for Louis XIV. had begun to look coldly upon him ; but it was not his fortune to remain long in obscurity. Amongst the visitors at his uncle's house, whose friendship he had the happiness to gain, was the Duke de Beauvilliers, a man who could live at the court of Louis without ceasing to live as a Christian. This nobleman was appointed in the year 1689 Governor of the Duke of Burgundy, the grandson of Louis, and heir, after his father the Dauphin, to the throne of France. His first act was to appoint Fenelon preceptor to his royal charge, then in his eighth year, and already distinguished for the frightful violence of his passions, his insolent demeanour, and tyrannical spirit. The child had, however, an affectionate heart and a quick sense of shame. Fenelon gained his love and confidence, and used his power to impress upon him the Christian's method of self-government. His headstrong pupil was subdued, not by the fear of man, but by the fear of God. In the task of instruction less difficulty awaited him ; for the young prince was remarkably intelligent and industrious. The progress of a royal student is likely to be rated at his full amount by common fame ; but there is reason to believe that in this case it was rapid and substantial.

In 1694 he was presented to the Abbey of St. Valery, and two years afterwards promoted to the Archbishopric of Cambray, with a command that he should retain his office of preceptor, giving personal attendance only during the three months of absence from his diocese which the Canons allowed. In resigning his abbey, which from conscientious motives he refused to keep with his archbishopric, he was careful to assign such reasons as might not convey an indirect censure of the numerous pluralists among his clerical brethren. Probably this excess of delicacy, which it is easy to admire and difficult to justify, was hardly requisite in the case of many of the offenders. One of them, the Archbishop of Rheims, when informed of the conscientious conduct of Fenelon, made the following reply: "M. de Cambray with his sentiments does right in resigning his benefice, and I with my sentiments do very right in keeping mine." This mode of defence is capable of very general application, and is in fact very generally used, being good for other cases beside that of pluralities.

This preferment was the last mark of royal favour which he received. Louis was never cordially his friend, and there were many at court eager to convert him into an enemy. An opportunity was afforded by Fenelon's connexion with Madame Guyon.

It is well known that this lady was the great apostle of the Quietists,



a sect of religionists, so called, because they studied to attain a state of perfect contemplation, in which the soul is the passive recipient of divine light. She was especially noted for her doctrine of pure love ; she taught that Christian perfection consisted in a disinterested love of God, excluding the hope of happiness and fear of misery, and that this perfection was attainable by man. Fenelon first became acquainted with her at the house of his friend the Duke de Beauvilliers, and, convinced of the sincerity of her religion, was disposed to regard her more favourably from a notion that her religious opinions, against which a loud clamour had been raised, coincided very nearly with his own. It has been the fashion to represent him as her convert and disciple. The truth is, that he was deeply versed in the writings of the later mystics ; men who, with all their extravagance, were perhaps the best representatives of the Christian character to be found among the Roman Catholics of their time. He considered the doctrine of Madame Guyon to be substantially the same with that of his favourite authors ; and whatever appeared exceptionable in her expositions, he attributed to loose and exaggerated expression natural to her sex and character.

The approbation of Fenelon gave currency to the fair Quietist amongst orthodox members of the church. At last the bishops began to take alarm : the clamour was renewed, and the examination of her doctrines solemnly intrusted to Bossuet and two other learned divines. Fenelon was avowedly her friend ; yet no one hitherto had breathed a suspicion of any flaw in his orthodoxy. It was even during the examination, and towards the close of it, that he was promoted to the Archbishopric of Cambray. The blow came at length from the hand of his most valued friend. He had been altogether passive in the proceedings respecting Madame Guyon. Bossuet, who had been provoked into vehement wrath, and had resolved to crush her, was sufficiently irritated by this temperate neutrality. But when Fenelon found himself obliged to publish his ‘Maxims of the Saints,’ in which, without attacking others, he defends his own views of some of the controverted points, Bossuet, in a tumult of zeal, threw himself at the feet of Louis, denounced his friend as a dangerous fanatic, and besought the King to interpose the royal arm between the Church and pollution. Fenelon offered to submit his book to the judgment of the Pope. Permission was granted in very ungracious terms, and presently followed by a sentence of banishment to his diocese. This sudden reverse of fortune, which he received without even whispering a complaint, served to show the forbearance and meekness of his spirit, but it deprived him of none of his powers. An animated con-

troversy arose between him and Bossuet, and all Europe beheld with admiration the boldness and success with which he maintained his ground against the renowned and veteran disputant; and that, too, in the face of fearful discouragement. The whole power of the court was arrayed against him, and he stood alone; for his powerful friends had left his side. The Cardinal de Noailles and others, who had in private expressed unqualified approbation of his book, meanly withheld a public acknowledgment of their opinions. Whilst his enemy enjoyed every facility, and had Louis and his courtiers and courtly bishops to cheer him on, it was with difficulty that Fenelon could find a printer who would venture to put to the press a work which bore his name. Under these disadvantages, harassed in mind, and with infirm health, he replied to the deliberate and artful attacks of his adversary with a rapidity which, under any circumstances, would have been astonishing. He was now gaining ground daily in public opinion. The Pope also, who knew his merit, was very unwilling to condemn. His persecutors were excited to additional efforts. He had already been banished from court; now he was deprived of the name of preceptor, and of his salary,—of that very salary which some time before he had eagerly offered to resign, in consideration of the embarrassed state of the royal treasury. The flagging zeal of the Pope was stimulated by threats conveyed in letters from Louis penned by Bossuet. At length the sentence of condemnation was obtained; but in too mild a form to satisfy altogether the courtly party. No bull was issued. A simple brief pronounced certain propositions to be erroneous and dangerous, and condemned the book which contained them, without sentencing it in the usual manner to the flames.

It is needless to say that Fenelon submitted. He published without delay the sentence of condemnation, noting the selected propositions, and expressing his entire acquiescence in the judgment pronounced; and prohibited the faithful in his diocese from reading or having in their possession his own work, which up to that moment he had defended so manfully. Protestants, who are too apt in judging the conduct of Roman Catholics, to forget every thing but their zeal, have raised an outcry against his meanness and dissimulation. Fenelon was a sincere member of a Church which claimed infallibility. We may regret the thralldom in which such a mind was held by an authority from which the Protestant happily is free; but the censure which falls on him personally for this act is certainly misplaced.

The faint hopes which his friends might have cherished, that when the storm had passed he would be restored to favour, were soon extinguished by an event, which, whilst it closed against him for ever the doors of

the palace, secured him a place in history, and without which it is probable that he would never have become the subject even of a short memoir.

A manuscript which he had intrusted to a servant to copy, was treacherously sold by this man to a printer in Paris, who immediately put it to the press, under the title of Continuation of the Fourth Book of the Odyssey, or Adventures of Telemachus, Son of Ulysses, with the royal privilege, dated April 6, 1699. It was told at court that the forthcoming work was from the pen of the obnoxious archbishop; and before the impression of the first volume was completed, orders were given to suppress it, to punish the printers, and seize the copies already printed. A few however escaped the hands of the police, and were rapidly circulated. One of them, together with a copy of the remaining part of the manuscript, soon after came into the possession of a printer at the Hague, who could publish it without danger.

So eager was the curiosity which the violent proceedings of the French court had excited, that the press could hardly be made, with the utmost exertion, to keep pace with the demand. Such is the history of the first appearance of *Telemachus*.

Louis was persuaded to think that the whole book was intended to be a satire on him, his court, and government; and the world was persuaded for a time to think the same. So, whilst the wrath of the King was roused to the uttermost, all Europe was sounding forth the praises of Fenelon. The numerous enemies of Louis exulted at the supposed exhibition of his tyranny and profligate life. The philosophers were charmed with the liberal and enlightened views of civil government which they seemed to discover. It is now well known that the anger and the praise were alike undeserved. The book was probably written for the use of the Duke of Burgundy, certainly at a time when Fenelon enjoyed the favour of his sovereign, and was desirous to retain it. He may have forgotten that it was impossible to describe a good and a bad king, a virtuous and a profligate court, without saying much that would bear hard upon Louis and his friends. As for his political enlightenment, it is certain that he had his full share of the monarchical principles of his time and nation. He wished to have good kings, but he made no provision for bad ones. It is difficult to believe that Louis was seriously alarmed at his notions of political economy. That science was not in a very advanced state; but no one could fear that a prince could be induced by the lessons of his tutor to collect all the artificers of luxury in his capital, and drive them in a body into the fields to cultivate potatoes and cabbages, with a belief that he would thus make the country a garden, and the town a seat of the Muses.

Nothing was now left to Fenelon but to devote himself to his episcopal duties, which he seems to have discharged with equal zeal and ability. The course of his domestic life, as described by an eye-witness, was retired, and, to a remarkable degree, uniform. Strangers were courteously and hospitably received; but his society was confined for the most part to the ecclesiastics who resided in his house. Amongst them were some of his own relations, to whom he was tenderly attached, but for whose preferment, it should be noticed, he never manifested an unbecoming eagerness. His only recreation was a solitary walk in the fields, where it was his employment, as he observes to a friend, to converse with his God. If in his rambles he fell in with any of the poorer part of his flock, he would sit with them on the grass, and discourse about their temporal as well as their spiritual concerns; and sometimes he would visit them in their humble sheds, and partake of such refreshment as they offered him.

In the beginning of the 18th century we find him engaged at once in controversy and politics. The revival of the old dispute with the Jansenists, to whom he was strongly opposed, obliged him to take up his pen; but in using it he never forgot his own maxim, that "rigour and severity are not of the spirit of the Gospel." For a knowledge of his political labours we are indebted to his biographer, the Cardinal de Bausset, who first published his letters to the Duke de Beauvilliers on the subject of the war which followed the grand alliance in the year 1701. In them he not only considers the general questions of the succession to the Spanish monarchy, the objects of the confederated powers, and the measures best calculated to avert or soften their hostility, but even enters into details of military operations, discusses the merits of the various generals, stations the different armies, and sketches a plan of the campaign. Towards the close of the war he communicated to the Duke de Chevreuse heads of a very extensive reform in all the departments of government. This reform did not suppose any fundamental change of the old despotism. It was intended, doubtless, for the consideration of the Duke of Burgundy, to whose succession all France was looking forward with sanguine hopes, founded on the acknowledged excellence of his character, which Fenelon himself had so happily contributed to form. But amongst the other trials which visited his latter days, he was destined to mourn the death of his pupil.

Fenelon did not long survive the general pacification. After a short illness and intense bodily suffering, which he seems to have supported by calling to mind the sufferings of his Saviour, he died February 7th, 1715, in the sixty-fourth year of his age. No money was found in his

coffers. The produce of the sale of his furniture, together with the arrears of rent due to him, were appropriated, by his direction, to pious and charitable purposes.

The calumnies with which he was assailed during the affair of Quietism were remembered only to the disadvantage of their authors. The public seem eventually to have regarded him as a man who was persecuted because he refused to be a persecutor ; who had maintained, at all hazards, what he believed to be the cause of truth and justice ; and had resigned his opinion only at that moment when conscience required the sacrifice.

Universal homage was paid by his contemporaries to his talents and genius. In the grasp and power of his intellect, and in the extent and completeness of his knowledge, none probably would have ventured to compare him with Bossuet ; but in fertility and brilliancy of imagination, in a ready and dexterous use of his materials, and in that quality which his countrymen call *esprit*, he was supposed to have no superior. Bossuet himself said of him “ *Il brille d’esprit, il est tout esprit, il en a bien plus que moi.*”

It is obvious that his great work, the *Adventures of Telemachus*, was, in the first instance, indebted for some portion of its popularity to circumstances which had no connexion with its merits ; but we cannot attribute to the same cause the continued hold which it has maintained on the public favour. Those who are ignorant of the interest which attended its first appearance still feel the charm of that beautiful language which is made the vehicle of the purest morality and the most ennobling sentiments. In the many editions through which it passed, between its first publication and the death of the author, Fenelon took no concern. Publicly he neither avowed nor disavowed the work, though he prepared corrections and additions for future editors. All obstacles to its open circulation were removed by the death of Louis ; and in the year 1717, the Marquis de Fenelon, his great-nephew, presented to Louis XV. a new and correct edition, superintended by himself, from which the text of all subsequent editions has been taken.

The best authority for the life of Fenelon accessible to the public is the laborious work of his biographer, the Cardinal de Bausset, which is rendered particularly valuable by the great number of original documents which appear at the end of each volume. Its value would be increased if much of the theological discussion were omitted, and the four volumes compressed into three.

---





*Engraved by W. Kneller*

SIR CHRISTOPHER WREN.

*(From the original picture by Sir G. Kneller)  
in the possession of the Royal Society.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

*London: Published by Charles Knight, Pall Mall East*

JOHN F. BERRY  
AND THE BERRY  
FOUNDATION



now call an orrery. His genius is also stated to have displayed itself at this early age in other mechanical contrivances.

In 1646 he was sent to Oxford, and entered as a gentleman commoner at Wadham College. Of his academical life we can say little more than that it confirmed the promise of his early proficiency. He was especially distinguished by his mathematical acquirements, and gained the notice and acquaintance of many of the most learned and influential persons belonging to the university. Several short treatises and mechanical inventions are assigned to this period of his life: but as these have long ceased to interest any but curious inquirers into the history of literature or science, we can only indicate their existence, and refer to other and more comprehensive works. In 1650 Wren graduated as Bachelor of Arts. He was elected Fellow of All Souls on the 2d of November, 1653, and took the degree of Master of Arts on the 12th of December in the same year. Of the subjects which engaged his active and versatile mind at this time, one of the chief was the science of Anatomy; and he is, on apparently good grounds, thought to have first suggested and tried the interesting experiment of injecting liquids of various kinds into the veins of living animals,—a process of surgery, which, applied to the transfusion of healthy blood into a morbid or deficient circulation, has been revived, not without some promise of important results, in our own day. Another subject which attracted much of his attention was the Barometer; but he has no claim whatever, either to the invention of that instrument, or to the detection of the great principle of physics, of which it is an exemplification. The notion which has been taken up of his right to supplant the illustrious Torricelli here, has arisen merely from mistaking the question with regard to the causes of the fluctuations in the height of the barometrical column, while the instrument continues in the same place, for the entirely different question as to the cause why the fluid remains suspended at all; about which, since the celebrated experiments of Pascal, published in 1647, there never has been any controversy. It was the former phenomenon only which was attributed by some to the influence of the moon, and which Wren and many of his contemporaries exercised their ingenuity, as many of their successors have done, in endeavouring to explain.

In carrying on these investigations and experiments, Wren's diligence was stimulated and assisted by his having been admitted a member, about this period, of that celebrated association of philosophical inquirers, out of whose meetings, begun some years before, eventually arose the Royal Society. But, like several others of the more eminent

members, he was soon removed from the comparative retirement of Oxford. On the 7th of August, 1657, being then only in his twenty-fifth year, he was chosen to the Professorship of Astronomy in Gresham College. This chair he held till the 8th of March, 1661, when he resigned it in consequence of having, on the 31st of January preceding, received the appointment of Savilian Professor of Astronomy at Oxford. On the 12th of September, 1661, he took his degree of Doctor of Civil Law at Oxford, and was soon after admitted *ad eundem* by the sister university. During all this time he had continued to cultivate assiduously the various branches of mathematical and physical science, and to extend his reputation both by his lectures and by his communications to the "Philosophical Club," as it was called, which, in 1658, had been transferred to London, and usually met on the Wednesday of every week at Gresham College, in Wren's class-room, and, on the Thursday, in that of his associate Rooke, the Professor of Geometry. The longitude, the calculation of solar eclipses, and the examination and delineation of insects and animalcula by means of the microscope, may be enumerated among the subjects to which he is known to have devoted his attention. On the 15th of July, 1662\*, he and his associates were incorporated under the title of the Royal Society; and Wren, who drew out the preamble of the charter, bore a chief part in the effecting of this arrangement.

The future architect of St. Paul's had already been called upon to devote a portion of his time to the professional exercise of that art from which he was destined to derive his greatest and most lasting distinction. Sir John Denham, the poet, had on the Restoration been rewarded for his services by the place of Surveyor of the Royal Works; but although, in his own words, he then gave over poetical lines, and made it his business to draw such others as might be more serviceable to his Majesty, and he hoped more lasting, it soon became apparent that his genius was much better suited to "build the lofty rhyme" than to construct more substantial edifices. In these circumstances Wren, who was known among his other accomplishments to be well acquainted with the principles of architecture, was sent for, and engaged to do the duties of the office in the capacity of Denham's assistant or deputy. This was in the year 1661. It does not appear that for some time he was employed in any work of consequence in his new character; and in 1663 it was proposed to send him out to Africa, to superintend the construction of a new harbour

\* In the Life of Boyle this event is stated to have occurred in 1663. A second charter was granted to the Society, in that year, on the 22d of April.

and fortifications at the town of Tangier, which had been recently made over by Portugal to the English Crown, on the marriage of Charles with the Infanta Catherine. This employment he wisely declined, alleging the injury he apprehended to his health from a residence in Africa. Meanwhile, the situation which he held, and his scientific reputation, began to bring him something to do at home. Sheldon, Archbishop of Canterbury, who was Chancellor of the University of Oxford, had resolved to erect at his own expense a new theatre, or hall, for the public meetings of the University; and this building Wren was commissioned to design. The Sheldonian Theatre, celebrated for its unrivalled roof of eighty feet in length by seventy in breadth, supported without either arch or pillar, was Wren's first public work, having been begun this year, although it was not finished till 1668. About the same time he was employed to erect a new chapel for Pembroke College, in the University of Cambridge, to be built at the charge of his uncle, the Bishop of Ely.

But, while he was about to commence these buildings, he was appointed to take a leading part in another work, which ultimately became the principal occupation of the best years of his life, and enabled him to afford to his contemporaries and to posterity by far the most magnificent display of his architectural skill and genius. Ever since the Restoration, the repair of the Metropolitan Cathedral of St. Paul's, which during the time of the Commonwealth had been surrendered to the most deplorable desecration and outrage, had been anxiously contemplated; and on the 18th of April, 1663, letters patent were at length issued by the King, appointing a number of Commissioners, among whom Wren was one, to superintend the undertaking. Under their direction a survey of the state of the building was taken, and some progress was made in the reparation of its most material injuries, when, after the sum of between three and four thousand pounds had been expended, the great fire, which broke out on the night of Sunday, the 2d of September, 1666, on the following day reduced the whole pile to a heap of ruins.

A considerable part of the year before this Wren had spent in Paris, having proceeded thither, it would seem, about Midsummer, 1665, and remained till the following spring. The object of his visit was to improve himself in the profession in which he had embarked, by the inspection and study of the various public buildings which adorned the French capital, where the celebrated Bernini was at this time employed on the Louvre, with a thousand workmen under him, occupied in all the various departments of the art, and forming altogether, in Wren's opinion, probably the best school of architecture to

be then found in Europe. He appears accordingly to have employed his time, with his characteristic activity, in examining everything deserving of attention in the city and its neighbourhood; and lost no opportunity either of making sketches of remarkable edifices himself, or of procuring them from others, so that, as he writes to one of his correspondents, he hoped to bring home with him almost all France on paper. The terrible visitation, which a few months after his return laid half the metropolis of his native country in ashes, opened to him a much wider field whereon to exercise the talent which he had been thus eager to cultivate and strengthen by enlarged knowledge, than he could, while so engaged, have expected ever to possess. He was not slow to seize the opportunity; and while the ashes of the city were yet alive, drew up a plan for its restoration, the leading features of which were a broad street running from Aldgate to Temple Bar, with a large square for the reception of the new cathedral of St. Paul; and a range of handsome quays along the river. The paramount necessity of speed in restoring the dwellings of a houseless multitude, prevented the adoption of this project; and the new streets were in general formed nearly on the line of the old ones. But they were widened and straightened, and the houses were built of brick instead of wood.

Soon after the fire, Wren was appointed Surveyor-General and principal Architect for rebuilding the parish churches; and on the 28th of March, 1669, a few days after the death of Sir John Denham, he was made Surveyor-General of the Royal Works, the office which he had for some time executed as deputy. On the 30th of July he was unanimously chosen Surveyor-General of the repairs of St. Paul's (another office which Denham had also held) by the commissioners appointed to superintend that work, of whom he was himself one. At first it was still thought possible to repair the cathedral; and a part of it was actually fitted up as a temporary choir, and service performed in it. After some time, however, it became evident that the only way in which it could ever be restored was by rebuilding the whole from the foundation. Before the close of the year 1672 Wren had prepared and submitted to the King different plans for the new church; and his Majesty having fixed upon the one which he preferred, a commission for commencing the work was issued on the 12th of November, 1673. On the 20th of the same month, Wren, who had been re-appointed architect for the work, and also one of the commissioners, was knighted at Whitehall, having resigned his professorship at Oxford in the preceding April.

During the space of time which had elapsed since the fire, the

Surveyor-General of Public Works had begun or finished various minor buildings connected with the restoration of the city, and also some in other parts of the kingdom. Among the former may be mentioned the fine column called the Monument; the church of St. Mary-le-Bow in Cheapside, the spire of which is considered the most beautiful he ever constructed, and a masterpiece of science, both begun in 1671, and finished in 1677; and the church of St. Stephens, Walbrook, begun 1672, and finished in 1679, the interior of which is one of the most exquisite specimens of architectural art which the world contains, and has excited, perhaps, more enthusiastic admiration than anything else that Wren has done. During the whole of this time, too, notwithstanding the little leisure which his professional avocations must have left him, he appears to have continued his philosophical pursuits, and his attendance on the Royal Society, of which, from the first, he had been one of the most active and valuable members. His communications, and the experiments which he suggested, embraced some of the profoundest parts of astronomy and the mathematics, as well as various points in anatomy and natural history, and the chemical and mechanical arts.

The design which Wren had prepared for the new Cathedral, and which had been approved by the King, being that of which a model is still preserved in an apartment over the Morning-Prayer Chapel, did not in some respects please the majority of his brother-commissioners, who insisted that, in order to give the building the true cathedral form, the aisles should be added at the sides as they now stand, although the architect is said to have felt so strongly the injury done by that alteration, that he actually shed tears in speaking of it. This difficulty, however, being at length settled, his Majesty, on the 14th May, 1675, issued his warrant for immediately commencing the work; and accordingly, after a few weeks more had been spent in throwing down the old walls and removing the rubbish, the first stone was laid by Sir Christopher, assisted by his master-mason, Mr. Thomas Strong, on the 21st of June. From this time the building proceeded steadily till its completion in 1710; in which year the highest stone of the lantern on the cupola was laid by Mr. Christopher Wren, the son of the architect, as representing his venerable father, now in the seventy-eighth year of his age.

The salary which Sir Christopher Wren received as architect of St. Paul's was only £200 a year. Yet in the last years of his superintendence a moiety of this pittance was withheld from him by the Commissioners, under the authority of a clause which they had got inserted

in an act of parliament entitling them to keep back the money till the work should be finished, by way of thereby ensuring the requisite expedition in the architect. Even after the building had been actually completed, they still continued, on the same pretence, to refuse payment of the arrears due, alleging that certain things yet remained to be done, which, after all, objections and difficulties interposed by themselves alone prevented from being performed. Like his great predecessor, Michael Angelo, Wren was too honest and zealous in the discharge of his duty not to have provoked the enmity of many persons who had their private ends to serve in the discharge of a great public duty. He was at last obliged to petition the Queen on the subject of the treatment to which he was subjected; but it was not till after a struggle of some years that he succeeded in obtaining redress. The faction by whom he was thus opposed even attempted to blacken his character by a direct charge of peculation, or at least of connivance at that crime, in a pamphlet entitled 'Frauds and Abuses at St. Paul's,' which appeared in 1712, and in reference to which Sir Christopher deemed it proper to appeal to the public in an anonymous reply published the year after, wherein he vindicated himself triumphantly from the aspersions which had been thrown upon him.

The other architectural works which he designed and executed during this period, both in London and elsewhere, are far too numerous to be mentioned in detail. Among them were the parish church of St. Bride, in Fleet Street, which was finished in 1680, and the beautiful spire of which, originally two hundred and thirty-four feet in height, has been deemed to rival that of St. Mary-le-Bow; the church of St. James, Westminster, finished in 1683, a building in almost all its parts not more remarkable for its beauty than for its scientific construction; and of which the roof especially, both for its strength and elegance, and for its adaptation to the distinct conveyance of sound, has been reckoned a singularly happy triumph of art; and the church of St. Andrew, Holborn, a fine specimen of a commodious and an imposing interior: besides many others of inferior note. In 1696 he commenced the building of the present Hospital at Greenwich, of which he lived to complete the greater part. This is undoubtedly one of the most splendid erections of our great architect. Among his less successful works may be enumerated Chelsea Hospital, begun in 1682, and finished in 1690, a plain, but not an inelegant building; his additions to the Palace of Hampton Court, carried on from 1690 to 1694, which are certainly not in the best taste; and his repairs at Westminster Abbey, of which he was appointed Surveyor-General in 1698. In his attempt

to restore and complete this venerable edifice, his ignorance of the principles of the Gothic style, and his want of taste for its peculiar beauties, made him fail perhaps more egregiously than on any other occasion. In 1679 he completed the Library of Trinity College, Cambridge, one of the most magnificent of his works; and in 1683, the Chapel of Queen's College, and the Ashmolean Museum, at Oxford. The same year he began the erection of the extensive pile of Winchester Castle, originally intended for a royal palace, but now used as a military barrack. To these works are to be added a long list of halls for the city companies, and other public buildings, as well as a considerable number of private edifices. Among the latter was Marlborough House, Pall-Mall. Indeed scarcely a building of importance was undertaken during this long period which he was not called upon to design or superintend. The activity both of mind and body must have been extraordinary, which enabled him to accomplish what he did, not to speak of the ready and fertile ingenuity, and the inexhaustible sources of invention and science he must have possessed, to meet the incessant demands that were made for new and varying displays of his contriving skill. It appears, too, in addition to all this, that the duties imposed upon him by his place of Surveyor of Public Works, for which he only received a salary of £100 a year, were of an extremely harassing description, and must have consumed a great deal of his time. Claims and disputes as to rights of property, and petitions or complaints in regard to the infringement of the building regulations in every part of the metropolis and its vicinity, seem to have been constantly submitted to his examination and adjudication; and Mr. Elmes has printed many of his reports upon these cases from the original manuscripts, which afford striking evidence both of the promptitude with which he gave his attention to the numerous calls thus made upon him, and of the large expenditure of time and labour they must have cost him.

The long series of years during which Wren was occupied in the accomplishment of his greatest work, and which had conducted him from the middle stage of life to old age, brought to him also of course various other changes. He had been twice married, and had become the father of two sons and a daughter, of whom the eldest, Christopher, was the author of *Parentalia*, or *Memoirs of the Family of the Wrens*. In 1680, he was elected to the Presidency of the Royal Society, on its being declined by Mr. Boyle; and this honourable office he held for two years; during which, notwithstanding all his other occupations, we find him occupying the chair in person at almost every meeting, and still continuing to take his usual prominent part in the scientific

discussions of the evening. In 1684 there was added to his other appointments that of Comptroller of the Works at Windsor. In May, 1685, he entered parliament as one of the members for Plympton; and he also sat for Windsor both in the convention which met after the revolution, and in the first parliament of William III. He afterwards sat for Weymouth in the parliament which met in February, 1700, and which was dissolved in November of the year following.

The evening of Wren's life was marked by neglect and ingratitude. In the eighty-sixth year of his age he was removed from the office of Surveyor-General, which he had held for forty-nine years, in favour of one Benson, whose incapacity and dishonesty soon led to his disgrace and dismissal. Fortunately Wren's temper was too happy and placid to be affected by the loss of court favour, and he retired to his home at Hampton Court, where he spent the last five years of his life chiefly in the study of the Scriptures, and the revision of his philosophical works. He died February 25, 1723, in the ninety-first year of his age.

More minute accounts of his life are to be found in the *Parentalia*, already mentioned, and in Mr. Elmes's quarto volume. We may also refer the reader to a longer memoir in the *Library of Useful Knowledge*.



Interior of St. Stephens, Walbrook.



THE WALKER  
FUND LIBRARY  
AMOR LENOX  
THE FOUNDATION



*Engraved by T. St. John.*

CORNELLIS.

*From an original Picture by P. Verelsteden  
in the possession of the Institute of France*

Printed by J. G. & J. H. St. John, at the Office of the American Museum of Natural History, New York.

*And by J. G. & J. H. St. John, at the Office of the American Museum of Natural History, New York.*







PETER CORNEILLE was born at Rouen, on the 6th of June, 1606. His father was in the profession of the law, and held an office of trust under Louis XIII. Young Corneille was educated in the Jesuits' College at Rouen; and, while there, formed an attachment to that society, which he maintained unimpaired in after-life. He was destined for the bar, at which he practised for a short time, but had no turn for business; and with better warrant than the many, who mistake a lazy and vagabond inclination for genius and the muse, he quitted the path of ambition and preferment for a road to fame, shorter, and therefore better suited to an aspiring, but impatient mind. A French writer congratulates his country, that he who would have made an obscure and ill-qualified provincial barrister, became, by change of place and pursuits, the glory and ornament of a great empire in its most splendid day. Corneille "left his calling for an idle trade," without having bespoken the favour of the public by any minor specimens of poetical talent. He seems indeed to have hung loose upon society, till a petty affair of gallantry discovered the mine of his natural genius, though not in his purest and richest vein. The story is told by Fontenelle, and has been related of many others with nearly the same incidents; being the common-place of youthful adventure. One of Corneille's friends had introduced him to his intended wife; and the lady, without any imputation of treachery on the part of the supplanter, took such a fancy to him, as induced her to play the jilt towards his introducer. Corneille moulded the embarrassment into a comedy entitled *Mélite*. The drama had hitherto been at a low ebb among the French. Their tragedy was flat and languid: to comedy, properly so called, they had no pretensions. The theatre therefore had hitherto been little attended by persons of condition. Racine describes the French stage when Cor-

neille began to write, as absolutely without order or regularity, taste or knowledge, as to what constituted the real merits of the drama. The writers, he says, were as ignorant as the spectators. Their subjects were extravagant and improbable; neither manners nor characters were delineated. The diction was still more faulty than the action; the wit was confined to the lowest puns. In short, all the rules of art, even those of decency and propriety, were violated. This description gives us the history of the infant drama in all ages and countries; of Thespis in his cart, and of Gammer Gurton's needle.

While the French theatre was in this state of degradation, Melite appeared. Whatever its faults might be, there was something in it like originality of character; some indications of a comic vein, and some ingenious combinations. The public hailed the new era with delight, and the poet was astonished at his own success. The stage seemed all at once to flourish and to have taken its proper station among the elegant arts and rational amusements. On the strength of this acquisition, a new company of actors was formed; and the successful experiment was followed up by a series of pieces of the same kind, between the years 1632 and 1635. Imperfect as they were, we may trace in them some sketches of new character, which the more methodical and practised dramatists of a later period filled out with more skill and higher colouring, but with little claim to invention.

We owe to Corneille one of the most entertaining personages in modern comedy,—the Chambermaid; who has succeeded to the office of the Nurse in the elder drama. This change was partly, perhaps principally, produced by that great revolution in the modern stage which introduced women upon the boards. While female characters were consigned to male representatives, the poet took every opportunity of throwing his heroines into breeches to slur over the awkwardness of the boys; and the subordinate instruments of the plot were duly enveloped in the hoods and flannels of decrepit age, while the hard features of the adult male were easily manufactured into wrinkles. But when once real women were brought forward, they had their own interests to manage as well as those of the author; and the artificial disguise of their persons would ill have accorded with those speculations, of which personal beauty formed a main ingredient. It was their business therefore, while they conducted the love-affairs of their mistresses, to interweave an underplot between themselves and the valets. Less attractive perhaps than their young ladies in outward show, they obtained compensation in the piquancy of wit intrusted to their

delivery, and thus divided the interest among the spectators in no disadvantageous proportion.

Corneille was also the first who brought the dialogue of polished society upon the French stage, which had hitherto been confined to the vulgarities of low comedy or the bombast of inflated tragedy. But it is time to rescue him from the obscurity of his own early compositions.

His first tragedy was *Medea*, copied principally from the faulty model of Seneca, whose prolix declamation, thus early adopted, probably exercised an unfavourable influence on the after fortunes of the national tragedy. His nephew Fontenelle, indeed, says that "he took flight at once, and soared instantly to the sublime." But this sentence has not been confirmed by more impartial critics. The Continent has condemned the witchcraft; but we are bound to uphold it in defence of our own Shakspeare, who has clothed his hags with more picturesque and awful attributes than the magnificent and imperial sorceries of Corneille, Seneca, or even Euripides himself have exhibited.

The year 1637 was the era of the production of the *Cid*; the play not only of France, but of Europe, for it has been translated into most languages. But a sudden reputation involves its possessor in many vexations. Poets were in those days compelled to be courtiers, if they would prosper. At the Hotel de Rambouillet, an assembly was held, consisting of courtly and fashionable authors, who wasted their time in composing *thèses d'amour* and other fopperies of romantic literature. Over this society, as well as over the politics of Europe, Richelieu chose to be umpire. He was also the founder of the French Academy, and the avowed patron of its members. With this hold upon their good manners, he kept four authors in pay, for the purpose of filling out his own dramatic and poetical skeletons. Corneille consented to be one of the party, and was so ignorant of the ways of courts as to fancy that he might exercise his judgment independently. He was even simple enough to be astonished that the well-meant liberty of making some alterations in the plot of one of these ministerial dramas should give offence: but as he was too proud to surrender his own judgment, or to risk future affronts from the revulsion of the Cardinal's goodwill; he withdrew from the palace, and abandoned himself to uncontrolled intercourse with the Muse. Richelieu therefore became the principal instigator of a cabal, which the envy of the wits sufficiently inclined them to form. Under such auspices, they entered into a conspiracy against the uncourtly offender. The prime minister could not endure that the successful intriguer in political life should be taxed with failure in unravelling the intricacies of a fictitious interest: he there-

fore looked at the real defects in a performance approved by the public with a jaundiced eye, and with but a half-opened one at its unrivalled beauties. As universal patron, he had settled a pension on the poet; but he levelled insidious and clandestine shafts against his fame. The "irritable tribe" willingly ran to arms, with Scuderi at their head, who wrote hostile remarks on the *Cid*, addressed to the Academy in the form of an appeal, in the course of which he quaintly termed himself *the evangelist of truth*. According to the statutes of the Academy, that august body could not take upon itself the decision, without the consent of both parties. Corneille, however indignant professionally, was under too many personal obligations to the Cardinal to spurn the authority of a tribunal erected by him. He therefore gave his assent to the reference, but in terms of considerable haughtiness. The Academy drew up a critique, to which they gave the modest title of "Sentiments of the French Academy on the tragedy of the *Cid*." In the execution of this delicate commission, the learned members contrived to reconcile the demands of sound taste and criticism with the tact and suppleness of courtiers. They gratified the splenetic temper of the minister by censures, the justice of which could not be gainsayed: but they praised the beauties of the great scenes with a nobleness of panegyric, which took from the author all right to complain of partiality. This solemn judgment was given after five months of debate and negotiation between the Cardinal and the academicians, who dreaded official frowns if they wholly acquitted, and public disgust if they condemned against evidence. If it be considered that this infant institution owed its birth to Richelieu, and depended on him for its future growth, the verdict is highly honourable to the individuals, and creditable to the literary character, even when disadvantageously circumstanced by being entangled in the trammels of a court.

Our limits will not permit the examination of insulated passages, nor even individual tragedies: but independently of the splendour of the execution, other circumstances attending the career of the *Cid* produced a strong impression on the remainder of Corneille's dramatic life. The *Cid* was taken from two Spanish plays, and several passages were actual translations; but not in sufficient number to invalidate the author's claim to a large share of originality. To set that question at rest, in the editions published by himself, he gave the passages taken from the Spanish at the bottom of the page. Yet it was objected by his rivals and libellers, that the author of *Medea* and the *Cid* could only imitate or translate: that he had stolen the first of his tragedies from Seneca, the second from Guillen de Castro: a clever borrower,



without a spark of tragic genius or invention ! Unluckily for this bold assertion, among other European languages, this French play was translated into Spanish ; and the nation, whence the piece was professedly derived, thought it worth while to recover it in the dress given to it by an illustrious foreigner. Against such unfounded censures it will be sufficient to quote the authority of Boileau, who speaks of the *Cid* as a *merveille naissante*.

Having achieved his first great success on a Spanish subject and after a Spanish model, it is not improbable that, had all gone smoothly, he would have continued to draw his resources from the same fountain. But vexation and resentment, usually at variance with good policy, now conspired with it ; and put him on seeking a new road to fame. He had, as it should seem, intended to transplant a succession of Spanish histories and fables, with all the entanglement of Spanish contrivance in the weaving of plots. But in weighing the objections started against his piece, he found that they applied rather to his Spanish originals than to his own adaptation ; he therefore determined to cut the knot of future controversy, by adopting the severity of the classical model. To this we owe *Horace*, *Pompée*, *Cinna*, and *Polyeucte* ;—masterpieces which his more polished but more feeble successors in vain aspired to emulate. Thus did this eager war of criticism produce a crisis in the dramatic history of France. Its stage would probably, but for this, have been heroic and chivalrous, not, as it is, Roman, and after the manner of the ancients. It might even have rivalled our own in tragic-comedy ;—that monster stigmatized by Voltaire as the offspring of barbarism, although, and perhaps because, he “ pilfered snug ” from it ; and might hope, by undervaluing the article, to escape detection as the purloiner.

At the end of three years, devoted to the study of the ancients, the injured author avenged the injuries levelled against the *Cid* by the production of *Horace*. Although the impetuous poet had not yet subdued his genius to the trammels of just arrangement, unity of action, and the other severe rules of the classic drama, such was the originality of conception, the force of character, and grandeur of sentiment displayed in this performance, that new views of excellence were opened to the astonished audience. Voltaire, with all the pedantry of mechanical criticism, objects to *Horace*, that in it there are three tragedies instead of one. Whatever may be the force of this objection with the French, it will weigh little with a people inured to the irregular sublimity and unfettered splendour of Shakspeare. *Cinna* redeemed many of the errors of *Horace*, and improved upon its various merits. The suffrages

of the public were divided between it and *Polyeucte*, as the author's masterpiece. But Dryden considered the *Cid* and *Cinna* as his two best plays; and speaks of *Polyeucte* sarcastically, as "in matters of religion, as solemn as the long stops upon our organs."

Before the performance of *Polyeucte*, Corneille read it at the Hôtel de Rambouillet. That tribunal affected sovereign authority in affairs of wit. Even the reputation of the author, now in all its splendour, could no further command the civilities of the critics, than to "damn with faint praise." Some days afterwards, Voiture called on Corneille, and, after much complimentary circumlocution, took the liberty of just hinting, that its success was not likely to answer expectation: above all, that its *Christian spirit* was calculated to give offence. Corneille, much alarmed, was about to withdraw it from rehearsal: the persuasions of an inferior player spirited him up to risk the consequences of avowing himself a Christian in an infidel court. Thus, probably, a hanger-on of the theatre had the honour of preventing a repetition of that malice, by which rival wits attempted to arrest the career of the *Cid*.

The winter of 1641-42 produced *La Mort de Pompée* and *Le Menteur*.

The opening of *La Mort de Pompée* has been frequently commended for grandeur of conception and originality; and the skill cannot be denied, by which the enunciation of the circumstances producing the interest of the piece is rendered consistent with the dignity of the subject and characters. The same praise cannot be conceded to the inflation of the dialogue and the intolerable length of the speeches. But the concluding speech of Cæsar to the second scene of the third act, and the whole of the fourth act, notwithstanding the censure of Dryden, both on this tragedy and the *Cinna*, that "they are not so properly to be called plays, as long discourses of reason and state," may be selected as favourable specimens of the style and power of French dialogue.

A short notice will be sufficient for the comedy of Corneille; and the production of *Le Menteur*, his most celebrated piece, affords the fittest opportunity. As the *Cid* was imitated from Guillen de Castro, Lope de Vega furnished the ground-work of *Le Menteur*. It is considered to be the first genuine example of the comedy of intrigue and character in France; for *Melite* was at best but a mere attempt. Before this time, there was no unsophisticated nature, no conventional manners, no truth of delineation. Mirth was raised by extravagance, and curiosity by incidents bordering on the impossible. Corneille appealed to nature and to truth: however imperfect the execution, in comparison with that

of his next successor in comedy, he proved that he knew how Thalia as well as Melpomene ought to be drawn. The greatest compliment, perhaps, that can be paid to his genius is, that he pointed out the road both to Racine and Moliere.

The year 1645 gave birth to *Rodogune*, in which, having before touched the springs of wonder and pity, he worked on his audience by the more powerful engine of terror. His subsequent pieces were below his former level, and betrayed, not so much the decay of genius from the growing infirmities of nature, as that fatal mistake in *writing themselves out*, so common to authors in the province of imagination. The cold reception of *Pertharite* disgusted the poet, and he renounced the stage in a splenetic little preface to the printed play, complaining that "he had been an author too long to be a fashionable one." The turmoil of the court and the gaiety of the theatre had not effaced his early sentiments of piety and religion; he therefore betook himself to the translation of Kempis's *Imitation of Jesus Christ*, which he performed very finely. This gave rise to a ridiculous and unfounded story, that the first book was imposed on him as a penance; the second, by the Queen's command; and the third, by the terrors of conscience during a severe illness.

As the mortification of failure faded away with time, his passion for the theatre revived. Notwithstanding some misgivings, he was encouraged by Fouquet Destrin in 1659, after six years' absence. He began again, with more benefit to his popularity than to his true fame, with *Œdipus*;—the noblest and most pathetic subject, most nobly treated, of ancient tragedy. *La Toison d'Or* came next; a spectacle got up for the King's marriage;—a species of piece in which the poet always plays a subordinate part to the scene-painter and the dress-maker. Sertorius is to be noticed as having given scope to the fine declamatory powers of Mademoiselle Clairon, the Siddons of the French stage.

Berenice rose to an unenviable fame, principally in consequence of the following circumstances. Henrietta of England, then Duchess of Orleans, whom Fontenelle had the good manners to compliment as "a princess who had a high relish for works of genius, and had been able to call forth some sparks of it *even in a barbarous country*," privately set Corneille and Racine to work on the same subject. Their pieces were represented at the same time; and the struggle between a worn-out veteran and a champion in the vigour of youth, terminated, as might have been expected, in the victory of the latter. This literary contest was known by the title of "the duel." The experiment proves the love of mischief, but says little for the good taste or benevolence

of the royal instigator. *Pulchérie* and *Surena* were his last productions : both better than *Berenice*, with sufficient merit to render the close of his literary life respectable, if not splendid.

The personal history of Corneille furnishes little anecdote ; we have only further to state, that he was chosen a Member of the French Academy in 1647, and was Dean of that society at the time of his death, which took place in 1684, in his seventy-ninth year.

He is said to have been a man of a devout and melancholy cast. He spoke little in company, even on subjects which his pursuits had made his own. The author of '*Melanges d'Histoire et du Literature*,' a work published under the name of Vigneut Marville, but really written by the Père Bonaventure d'Ayounne, a Cistercian monk of Paris, says, that "the first time he saw him, he took him for a tradesman of Rouen. His conversation was so heavy as to be extremely tiresome if it lasted long." But whatever might be the outward coarseness or dulness of the man, he was mild of temper in his family, a good husband, parent, and friend. His worth and integrity were unquestionable; nor had his connexion with the court, of which he was not fond, taught him that art of cringing so necessary to fortune and promotion. Hence his reputation was almost the only advantage accruing to him from his productions. His works have been often printed, and consist of more than thirty plays, tragedies and comedies.

Those who wish for a more detailed account of this great writer will find it in his life, by Fontenelle, in Voltaire's several prefaces, in Racine's Speech to the French Academy on the admission of his brother Thomas, and in Bayle. Many scattered remarks on him may also be found throughout Dryden's critical prefaces,



Tragic Masks, from Pompeii.





*Engraved by W. F. Poole*

HALLEY

*From an original Picture ascribed to Dahl  
in the possession of the Royal Society.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

*London Published by J. G. Knight, Pall Mall East*









EDMUND HALLEY, one of the greatest astronomers of an age which produced many, was born at a country house named Haggerston, in the parish of St. Leonard, Shoreditch, October 29, 1656. His father, a wealthy citizen and soapboiler, intrusted the care of his son's education to Dr. Gale, master of St. Paul's School. Here young Halley applied himself to the study of mathematics and astronomy with what was then considered great success; for, before he left school, he understood the use of the celestial globe, and could construct a sun-dial; and, as he has himself informed us, had already observed the variation of the needle. In 1673, being in the seventeenth year of his age, he was entered of Queen's College, Oxford, and two years afterwards gave the first proof of his astronomical genius by publishing, in the *Philosophical Transactions*, 1676, "a direct and geometrical method of finding the Aphelia and Eccentricities of the Planets." His father, who seems to have had none of that antipathy to a son's engaging in literary or scientific pursuits, which is represented as common to men of commerce by the writers of that age, supplied him liberally with astronomical instruments. Thus assisted, he made many observations, particularly of Jupiter and Saturn, by means of which he discovered that the motion of Saturn was slower, and that of Jupiter quicker than could be accounted for by the existing tables; and made some progress in correcting those tables accordingly. But he soon found that nothing could be done without a good catalogue of the stars. This, it appears, he had some intention of forming; but finding that Hevelius and Flamsteed were already employed on the same work, he proposed to himself to proceed to the southern hemisphere, and to complete the design by observing those stars which never rise above the horizons of Dantzic and Greenwich. Having obtained his father's consent, and an allowance of £300 a-year; and

having fixed upon St. Helena as the most convenient spot, he applied to Sir Joseph Williamson and Sir Jonas Moor, the Secretary of State and the Surveyor of the Ordnance. These gentlemen represented his intention in a favourable light to Charles II., and also to the East-India Company, who promised him every assistance in their power. Thus protected, he set out for St. Helena in 1676; his principal instruments being a sextant of five feet and a half radius, and a telescope of twenty-four feet in length. He found the climate not so favourable as he had been led to believe, and moreover describes himself as disgusted with the treatment he received from the Governor. Under these disadvantages, he nevertheless formed a catalogue of 350 stars, which he afterwards published under the name of '*Catalogus Stellarum Australium*.' He called a new constellation which he had observed, by the title of *Robur Carolinum*, in honour of the well-known oak of Charles II. While at St. Helena he also observed a transit of Mercury, and suggested the use which might be made of similar phenomena in the determination of the sun's distance from the earth. He first observed the necessity of shortening the pendulum as it approached the equator; or, at least, when Hook afterwards mentioned the circumstance to Newton, it was the first time the latter had heard of the fact.

Soon after his return to England, in November, 1678, Halley obtained the degree of M.A. from the University of Oxford, by royal mandate, and was elected Fellow of the Royal Society. This body had been requested by Hevelius to select some person who might add the southern stars to his catalogue. A dispute was also pending between him and Hook, as to the use of telescopes in observing the stars, to which the former objected. To aid Hevelius, as well as to decide upon the character of his observations, Halley went to Dantzic, and it is related, as a proof of the energy of his character, that in one month from the time of his landing in England he published his catalogue, procured a mandate, took the degree, was elected F.R.S., arranged to go to Dantzic, and wrote to Hevelius. He arrived on the 26th of May, 1679, and the same night entered upon a series of observations with Hevelius, which he continued till July, when he returned to England, fully satisfied of his coadjutor's accuracy.

In 1680 he again visited the continent. Between Paris and Calais he had a sight of the celebrated comet of that year, well known as the one by observations of which the orbit of these bodies was discovered to be nearly a parabola. He returned from his travels in the year 1681, and shortly after married the daughter of a Mr. Tooke

then Auditor of the Exchequer, which union lasted fifty-five years. He settled at Islington, where, for more than ten years, he occupied himself with his usual pursuits, of the results of which we shall presently speak more particularly.

In 1691 the Savilian Professorship of Astronomy became vacant, and, as Whiston relates, on the authority of Dr. Bentley, Bishop Stillingfleet was requested to recommend Mr. Halley. But the astronomer's avowed disbelief of Christianity interfered with his election in this instance, and the Professorship was given to Dr. Gregory. It is related by Sir David Brewster that Halley, when inclined to enter upon religious subjects with Newton, always received a check in words like the following, "You have not studied the subject—I have."

After the above-mentioned failure, our astronomer received from King William the commission of Captain in the Navy, with command of a small vessel. The singularity of the reward need not surprise us, when the same monarch offered a company of dragoons to Swift: indeed the pursuits of Captain Halley were nearly akin to those of navigation, and he himself might be almost as well qualified for sailing, though perhaps not for fighting a ship, as most of his brother officers. In his new character Halley made two voyages, the first to the Mediterranean, the Brazils, and the West Indies, for the purpose of ascertaining the variation of the magnet, a subject in which he was much interested, and of which he afterwards published a chart; the second to ascertain the latitudes and longitudes of the principal points in the British Channel, and the course of the tides. In 1703 he was elected Savilian Professor of Geometry, on the death of the celebrated Wallis. He received, about the same time, the degree of Doctor of Laws, which is conferred without requiring subscription to the Articles of the Church. In his connexion with the University he superintended several parts of the edition of the Greek Geometers, which was printed at the University press.

Halley succeeded Sir Hans Sloane, in 1713, as Secretary to the Royal Society; and, in 1719, on the death of Flamsteed, he was appointed Astronomer Royal at Greenwich. In this employment he continued till his death, under the patronage of Queen Caroline, wife of George II., who procured for him the half-pay of the rank he formerly held in the navy. In 1737 he was seized with a paralytic disorder; but nevertheless continued his labours till within a short time of his death, which took place in January, 1742, at the age of eighty-five. He was interred at Lee, near Blackheath, where a monument was erected to him and his wife by their two daughters.

In person Dr. Halley was rather tall, thin, and fair, and remarkable as well for energy as vivacity of character. He cultivated the friendship and acquired the esteem of his most distinguished contemporaries, and particularly of Newton, spite of their very different opinions. Indeed it may be said that to him we owe, in some degree, the publication of the 'Principia;' for Halley being engaged upon the consideration of Kepler's law, as it had been discovered by observation, viz., that the squares of the periodic times of planets are as the cubes of their distances, and suspecting that this might be accounted for on the supposition of a centripetal force, varying inversely as the square of the distance, applied himself to prove the connexion geometrically, in which he was unable to succeed. In this difficulty he applied to Hook and Wren, neither of whom could help him, and was recommended to consult Newton, then Lucasian Professor at Cambridge. Following this advice, he found in Newton all he wanted; and did not rest until he had persuaded his new acquaintance to give the results of his discoveries to the world. In about two years after this, the first edition of the 'Principia' was published, and the proofs were corrected by Halley, who supplied the well-known Latin verses which stand at the beginning of the work.

In conversation, Halley appears to have been of a jocose and somewhat satirical disposition. The following anecdote of him, which is told by Whiston, displays the usual modesty of the latter, when speaking of himself: "On my refusal from him of a glass of wine on a Wednesday or Friday, he said he was afraid I had a pope in my belly, which I denied, and added somewhat bluntly, that had it not been for the rise now and then of a Luther or a Whiston, he would himself have gone down on his knees to St. Winifred or St. Bridget, which he knew not how to contradict." It is related that when Queen Caroline offered to obtain an increase of Halley's salary as Astronomer Royal, he replied, "Pray, your Majesty, do no such thing, for should the salary be increased, it might become an object of emolument to place there some unqualified needy dependant, to the ruin of the institution." And yet the sum which he would not suffer to be increased was only £100 a-year.

To give even a catalogue of the various labours of Halley, would require more space than we can here devote to the subject. For a more detailed account both of his life and discoveries, we must refer the reader to the *Biographia Britannica*, to *Delambre*, *Histoire de l'Astronomie au dix-huitième Siecle*, livre II., and the *Philosophical Transactions* of the time in which he lived; or better perhaps to the

*Miscellanea Curiosa*, *London*, 1726, a selection of papers from the *Transactions*, containing the most remarkable of those written by Halley. We shall, nevertheless, proceed briefly to notice a few of the discoveries on which the fame of our astronomer is built.

The most remarkable of them, to a common reader, is the conjecture of the return of a comet. Some earlier astronomers, as Kepler, had imagined the motion of these bodies to be rectilinear. Newton, in explaining the principle of universal gravitation, showed how a comet might describe a parabola, and also how to calculate its motion, and compare it with observation. Hevelius had already indicated the curvature of a comet's path, and Dörfel, a Saxon clergyman, had calculated the path of the comet of 1680 upon this supposition. Halley, in computing the parabolic elements of all the comets which had been well observed up to his time, suspected, from the general likeness of the three, that the comets of 1531, 1607, and 1682, were the same. He was the more confirmed in this, by knowing that comets had been seen, though no good observations were recorded, in the years 1305, 1380, and 1456, giving, with the former dates, a chain of differences of 75 and 76 years alternately. Halley supposed, therefore, that the orbit of this comet was, not a parabola, but a very elongated ellipse, and that it would return about the year 1758. The truth of his conjecture was fully confirmed in January, 1759, by Messier. The first person, however, who saw Halley's comet, as it is now called, was George Palitzsch, a farmer in the neighbourhood of Dresden, who had studied astronomy by himself, and fitted up a small observatory.

But a much more useful exertion of Halley's genius and power of calculation is to be found in his researches on the lunar theory. It is to him that we are indebted for first starting the idea of finding the longitude at sea by means of the moon's place, which is now universally adopted. The principle of this problem is as follows. An observer at sea can readily find the time of day by means of the sun or a star, and can thereby correct a watch. If he could at the same moment in which he finds his own time, also discover that at Greenwich, the difference between the two, turned into degrees, minutes, and seconds, would be his longitude east or west of Greenwich. If, therefore, he carries with him a Nautical Almanac, in which the times of various astronomical phenomena are registered, as they will take place at Greenwich, or rather as they will be seen by an observer placed at the centre of the earth with a Greenwich clock, he can observe any one of these phenomena, and reduce it also to the

centre. He will then know the corresponding moments of time, for his own position and that of Greenwich. The moon traverses the whole of its orbit in little more than 27 days, and therefore moves rapidly with respect to the fixed stars, its motion being nearly a whole sign of the zodiac in 48 hours. If we observe the distance between the moon and a star, and find it to be ten degrees, the longitude of the place in which the observation is made can be known as aforesaid, if the almanac will tell what time it was at Greenwich when the moon was at that same distance from the star. In the time of Halley, though it was known that the moon moved nearly in an ellipse, yet the elements of that ellipse, and the various irregularities to which it is subject, were very imperfectly ascertained. It had, however, been known even from the time of the Chaldeans, that some of these irregularities have a *period*, as it is called, of little more than eighteen years, that is, begin again in the same order after every eighteen years; the periods and quantities of several other errors had also been discovered with something like accuracy. To make good lunar tables, that is, tables from which the place of the moon might be correctly calculated beforehand, became the object of Halley's ambition. He therefore observed the moon diligently during the whole of one of the periods of eighteen years, that is, from the end of 1721 to that of 1739, and produced tables which were published in 1749, after his death, and were of great service to astronomers. He also made another observation on the motion of the moon, which has since given rise to one of the finest discoveries of Laplace. In calculating from our tables the time of an ancient eclipse, observed at Babylon, B. C. 720, he found that, had the tables been correct, it would have happened three hours sooner than, according to Ptolemy, it did happen. This might have arisen from an error in the Babylonian observation; but on looking at other eclipses, he found that the ancient ones always happened later than the time indicated by his table, and that the difference became less and less as he approached his own time. From hence he concluded that the moon's average daily motion is subject to a very small acceleration, so that a lunar month at present is in a very slight degree shorter than a month in the time of the Chaldeans. This was afterwards shown by Laplace to arise from a very slow diminution in the eccentricity of the earth's orbit, caused by the attraction of the planets. For a further account of Halley's astronomical labours, we may refer to the History of Astronomy in the Library of Useful Knowledge, page 79.

We must also ascribe to Halley the first correct application of the

barometer to the measurement of the heights of mountains. Mariotte, who first enunciated the remarkable law that the elastic forces of gases are in the inverse proportion of the spaces which they occupy, had previously given a formula for the determination of these same heights, entirely wrong in principle, and inapplicable in practice. Halley, whose profound mathematical knowledge made him fully equal to the task, investigated and discovered the common formula, which, with some corrections for the temperature of the mercury in the barometer and the air without it, is in use at this day. We have already mentioned that Halley sailed to various parts of the earth with a view to determine the variation of the magnet. The result of his labours was communicated to the Royal Society in a map of the lines of equal variation, and also of the course of the trade-winds. He attempted to explain the phenomena of the compass by supposing that the earth is one great magnet, having four poles, two near each pole of the equator; and further accounts for the variation which the compass undergoes from year to year in the same place, by imagining a magnetic sphere, interior to the surface of the earth, which nucleus or inner globe turns on an axis with a velocity of rotation very little differing from that of the earth itself. This hypothesis has shared the fate of many others purely mathematical; that is, invented to show how the observed phenomena might be produced, without any ground of observation for believing that they really are so produced. If we put together the astronomical and geographical discoveries of Halley, and remember that the former were principally confined to those points which bear upon the subjects of the latter, we shall be able to find a title for their author less liable to cavil than that of the Prince of Astronomers, which has sometimes been bestowed upon him; we may safely say that no man, either before or since, has done more to improve the theoretical part of navigation, by the diligent observation alike of heavenly and earthly phenomena.

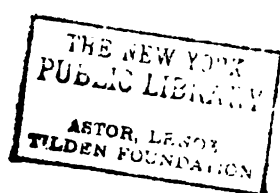
We pass over many minor subjects, such as his improvement of the diving-bell, or his measurement of the quantity of fluid abstracted by evaporation from the sea, to come to an application of science in which he led the way,—the investigation of the law of mortality. From observations communicated to the Royal Society of the births and deaths in the city of Breslau, he constructed the first table of mortality, which was in a great measure the foundation of the celebrated hypothesis of De Moivre, that the decrements of human life are nearly equal at all ages; that is, that out of eighty-six persons born, one dies every year, until all are gone. Halley's table as might be expected, was not

very applicable to human life in England, either then or now, but the effect of example is conspicuous in this instance. Before the death of Halley the tables of Kerseboom were published, and four years afterwards, those of De Parcieux.

We will not enlarge on the purely mathematical investigations of Halley, which would possess but little interest for the general reader. We may mention, however, his method for the solution of equations, his 'Analogy of the Logarithmic Tangents to the Meridian Line, or sum of the secants,' his algebraic investigation of the place of the focus of a lens, and his improvement of the method of finding logarithms. From the latter we quote a sentence, which, to the reader, for whose benefit we have omitted entering upon any discussion of these subjects, will appear amusing enough, if indeed he does not shrink to see how much he has degenerated from his ancestors. After describing a process which contains calculation enough for most people; and which further directs to multiply sixty figures by sixty figures, he adds, "If the curiosity of any gentleman that has leisure, would prompt him to undertake to do the logarithms of all prime numbers under 100,000 to 25 or 30 figures, I dare assure him that the facility of this method will invite him thereto; nor can anything more easy be desired. And to encourage him, I here give the logarithms of the first prime numbers under 20 to 60 places." One look at these encouraging rows of figures would be sufficient for any but a calculating boy.

No one who is conversant with the mathematics and their applications can read the life of the mathematicians of the seventeenth century without a strong feeling of respect for the manner in which they overcame obstacles, and of gratitude for the labour which they have saved their successors. The brilliancy of later names has, in some degree, eclipsed their fame with the multitude; but no one acquainted with the history of science can forget, how with poor instruments and imperfect processes, they achieved successes, but for which Laplace might have made the first rude attempts towards finding the longitude, and Lagrange might have discovered the law which connects the coefficients of the binomial theorem. But even of these men the same thing may one day be said; and future analysts may wonder how Laplace, with his paltry means of investigation, could account for the phenomenon of the acceleration of the moon's motion; and future astronomers may, should such a sentence as the present ever meet their eyes, be surprised that the observers of the nineteenth century should hold their heads so high above those of the seventeenth.







Engraved by R. H. H.

SULLY.

*From the original Picture by an unknown Artist,  
in the private collection of Louis Philippe, King of the French.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

London Published by Charles Knight, Pall Mall East







THE Duc de Sully is celebrated as the companion, minister, and historian of Henry IV., the most popular of French monarchs. Eminent among his contemporaries both as a soldier and as a financier, it is his especial glory that he laboured to promote the welfare of the industrious classes, when other statesmen regarded them but as the fount from which royal extravagance was to be supplied.

Maximilian, son of François de Bethune, Baron de Rosny, and of Charlotte Dauvet, daughter of a President of the Chamber of Accounts at Paris, was born at Rosny in the year 1559. His family was ancient, illustrious, and once wealthy, but his paternal grandfather had almost ruined it by his extravagance, his maternal grandfather disinherited him because he embraced the reformed religion; and with a slight annual allowance young Rosny had to seek his own fortune in the extravagant profession of arms. By a sage economy and order he, however, supported himself, and escaped the dependence and dishonour consequent on extravagance in a poor man. When thirteen years of age he was presented by his father to the young Prince of Navarre, who was only seven years older than himself, and who at once conceived that affection for him which was destined to cease only with his own life.

On the memorable day of St. Bartholomew, Rosny was in Paris, engaged in the prosecution of his studies. A known member of the Protestant Church, his life was in jeopardy: his servant and his tutor fell victims to the rage of the Papists, and he himself, obliged to quit his chambers for a safer hiding-place, and exposed to imminent dangers in traversing the streets, owed his deliverance more than once to a union of courage and coolness not very common in a youth of thirteen. After this event he, as well as his patron and friend Henry of Navarre, conformed for a time to the observances of the Roman Catholic religion; but in 1576, when Henry escaped from the thralldom in which he had been held, abjured Catholicism and placed himself at the head

of a Protestant army, Rosny was the companion of his flight, and first began to carry arms in his service. His noble birth, and the favour of his master, would at once have secured him military rank, but Rosny preferred to serve as a simple volunteer, in order, as he said, to learn the art of war by its elements.

At the surprise of Réde, at the siege of Villefranche, at the taking of Eause and Cahors, at the battle of Marmande, and in all the dangerous affairs in which Henry engaged, Rosny was always at his side. His good services, and the affection borne him by his master, did not, however, prevent a quarrel, which, it must be said, was provoked by his own imprudence and aggravated by his own pride. In spite of the commands of the Prince of Navarre, who had wisely prohibited the practice of referring private quarrels to the arbitrement of the sword, Rosny acted as second in a duel, in which one of the principals was desperately wounded. The Prince's anger at the breach of discipline was exasperated by a strong personal regard for the wounded man. He sent for Sully, rebuked him in harsh terms, and said that he deserved to lose his head for what he had done. The pride of the young soldier was touched; he replied that he was neither vassal nor subject of Navarre, and would henceforth seek the service of a more grateful master. The Prince rejoined in severe terms and turned his back on him; and Rosny was quitting the court, when the Queen, who knew his value, interfered, and reconciled him with her son.

Not long after he quitted Henry's service, alleging that he had pledged his word to accompany the Duc d'Alençon, afterwards Duc d'Anjou, brother of Henry III., in his contest for the sovereignty of Flanders; where, in case of success, he was to be put in possession of the estates which had belonged to his maternal grandfather. In this campaign he gained neither honour nor profit, and soon returned to his original master. Henry received him with open arms, and, as if to prove that absence had not affected his confidence and esteem, sent him a few days after on an important mission to Paris.

In the troubled times which followed, Rosny was unshaken in devotion to the cause which he had espoused. He accompanied Henry, when that prince, with only nineteen followers, threw himself, as a last resource, into La Rochelle. He undertook an embassy from that city to Henry III., then almost as much persecuted by the League as the King of Navarre himself. In his Memoirs he has left a striking description of the degraded condition of that sovereign, who had entirely abandoned himself to favourites and menials of the court. "His Majesty was in his cabinet; he had his sword by his side, a hood thrown over his

shoulders, a little bonnet on his head, and a basket full of little dogs hung round his neck by a broad riband." He listened to Rosny with vacant stupidity, neither moving his feet, his hands, nor his head. When he spoke, he complained of the audacity and insults of the League—said that nothing would go well in France until the King of Navarre went to mass—but agreed, finally, that Rosny might treat with the envoys of the Protestant Cantons of Switzerland, in his name as well as the King of Navarre's, for the raising of twenty thousand Swiss troops, to be employed between the two sovereigns.

Henry, through his imprudence, lost all the advantages which his faithful servant's treaty with the Swiss might have secured to him; but neither disgusted nor dispirited by this folly, Rosny persevered in his attachment to a cause which seemed altogether desperate to most others. He was at the siege of Fontenay, and at the brilliant victory of Coutras, for which the King of Navarre was materially indebted to the artillery under Rosny's command. His next great undertaking was to effect an entire reconciliation between his master and the King of France. Having succeeded in this, the eyes of all France thenceforward rested upon him as the only man who could re-establish the distracted kingdom. Such was the enthusiasm of many of the French at the time, that they called him "Le Dieu Rosny."

The desired reconciliation had not long been made when Henry III. was assassinated by a fanatic monk, and the King of Navarre laid claim to the vacant throne. But much remained to be done ere he could tranquilly seat himself upon it. His religion was an insurmountable obstacle to the mass of the nation, and the League was all-powerful in many parts of France and held possession of Paris.

Rosny fought with his accustomed valour at the battles of Arques and Ivry. At the latter he well nigh lost his life: he received five wounds, had two horses killed under him, and fell at last among a heap of slain. The manner in which he retired from this field, with four prisoners of the highest distinction and the standard of the enemy's commander-in-chief, is one of the most romantic incidents to be found in authentic history.

After the victory of Ivry, Rosny did not receive the rewards he merited, and he remained for some time at his estate under pretence of ill health, but secretly disinclined to return to the service of one who had shown little real gratitude for his long and faithful adherence. No sooner, however, did he learn that Henry was about to undertake the siege of Paris, than he left his retreat and hastened again to his master's side. His wounds were still uncured: he appeared before

the King leaning on crutches and with an arm in a sling. Touched by his devotedness and his melancholy state, Henry loaded him with caresses, and insisted that he should not expose himself for the present but remain near his person to assist him with his counsels.

When Henry first meditated his recantation of the Protestant faith, he consulted Rosny on this all-important subject. The honest soldier after reviewing the state of the parties opposed to the King, and holding out the hope that they would disagree among themselves and fall to pieces, said, "With regard to your change of religion, it cannot be otherwise than advantageous to you, seeing that your enemies have no other pretext for their hostility, but, sire, it is between you and your conscience to decide on this important article\*." Shortly after this conversation the death of the Duke of Parma relieved Henry from one of his most formidable enemies; but the implacable Leaguers, now becoming meanly desperate, laid plots against his life, and, it is said, even sent assassins to Mantes, where the King was residing. Henry thought to provide for his personal safety by continually surrounding himself by a corps of faithful English soldiers who were in his service; but Rosny, knowing the craft and audacity of fanaticism, and warned of the danger which menaced the competitor for the crown by the untimely fate of its last wearer, was kept in a state of continual alarm. At last, sinking his attachment to the reformed religion in his attachment to his King and his friend, he supplicated, on his knees, that he would conform to the doctrines of the Roman Catholic Church. And this the King did almost immediately after. Rosny continued a Protestant. Many of the cities of France now submitted to Henry, but Rouen, one of the most important of the number, was only gained over by the skilful negotiations of Rosny, who shortly after treated, and with equal success, with the Duke de Bouillon, the Duke de Guise, and other formidable enemies of the King. In return for these valuable services, he was admitted into the Councils of War and Finance, where his honesty and the favour of his master soon roused the corrupt and jealous members of those departments of government against him. Sogreat, indeed, were his annoyances that in the absence of Henry he withdrew again to his estates, and was only induced to return to his post by a personal visit from his sovereign.

The King, who was now strong enough to attack the Spaniards in their dominions in the Low Countries, laid siege to Arras: but through the bad conduct of those who administered the finances of the state, he

\* *Mémoires de Sully.*



not only found himself unprovided with all that was necessary to prosecute his undertaking with success, but was left in a state of entire and even personal destitution. In these difficulties he called Rosny to his assistance, and placed him at the head of the finances. Under the new minister's able and honest management, affairs soon changed their aspect: the treasury was replenished, while at the same time the people found their burdens lightened by economy. Rosny had prepared himself for this office, in the discharge of which he became a true benefactor of France, by a profound study of accounts and of the revenues and resources of the country; and when the post was given to him, for a considerable time he laboured night and day to detect the impolicy and the peculation of those who preceded him, and to re-establish the finances of the country.

In 1601 Rosny visited England, under pretence of travelling for his amusement, but in reality to ascertain the political views, and to secure the friendship of Elizabeth. On the Queen's death, a formal embassy to James I. was contemplated, but a dangerous illness which the King suffered at Fontainebleau delayed this measure. Henry, who thought he was dying, sent for the long-tried Rosny to his bed-side, and in his presence he desired the Queen to retain his faithful minister, as the welfare of herself, her family, and of the nation were dear to her. The King, however, recovered, and in the month of June, 1603, Rosny, with a numerous suite, departed on his mission. After a residence of several weeks in England, he succeeded in concluding an advantageous treaty with James I.

The following year he composed a treatise on religious tolerance, which he at one time hoped might reconcile the animosities of the Catholics and Protestants. If he failed in this, he left an example, rare at that time, of an enlightened and liberal spirit. Shortly after he wrote a memorial indicating the means by which the commerce and finances of France might be still further improved. At that time the political sciences could scarcely be said to exist; and it is not to be supposed that the minister's views were at all times just and enlarged. They show, at all events, that he looked to the industry of the people as the source of national wealth; and to their welfare as one, at least, of the objects of government. "Tillage and pasturage," it was a favourite saying of his, "are the two paps by which France is nourished—the real treasures of Peru." To manufactures he was less favourable, and his obstinacy on this head retarded many of Henry's schemes for the encouragement of national industry. His real glory as a minister is to be sought in the exactness which he introduced into

the management of the finances; and in the vigour with which he repressed peculation in his subordinates, and gave the whole weight of his influence to check the needless expenditure of a profligate court, to curtail those feudal claims which bore hardest on the vassals, and to oppose all privileges and monopolies, commonly bestowed upon courtiers in those days, which cramp the prosperity of a nation, to put a comparatively trifling sum into the pocket of a single person. One day the Duchesse de Verneuil, one of Henry's favourites, remonstrated with him for his severity in this respect, alleging that the King had a good right to make presents to his mistresses and nobility. His answer should be generally known. "This were well, Madam, if the King took the money from his own purse; but it is against reason to take it from the shopkeepers, artisans, and agricultural labourers, since it is they who support the King and all of us, and they would be well content with a single master, without having so many cousins, relations, and mistresses to maintain." His enemies insinuated that in the service of the state he had not neglected his own interest; and it is certain that he acquired immense wealth. Cardinal Richelieu, however, no friend to him, contents himself with the insinuation that if the last years of his administration were less austere than the first, it could not, at least, be said that they were profitable to himself without being very profitable to the state also.

To his other offices he added those of Grand Master of the Ordnance, and Surveyor-General of Public Works. The artillery had always been a favourite branch of the service with him; and he was esteemed one of the best generals of the age for the attack or defence of fortified places. As Master of the Ordnance he mainly contributed to the success of the war with the Duke of Savoy. The army was well paid and provided, the artillery always at its place at the proper time, and a general reform was felt throughout the service. In peace he was not less active in superintending the construction and repair of fortifications; and in those still more valuable labours which tend to facilitate intercourse, and provide for the internal wants of a nation. One of his chief works was a canal to join the Seine and Loire. There were few good engineers in those times, and Rosny, with his usual industry and earnestness, went himself to the spot and superintended the commencement of the work he had projected.

In 1606, after many brief quarrels between him and his master, caused chiefly by the intrigues of Henry's mistresses and worthless courtiers, Rosny was created Duc de Sully and a Peer of France.

The licentiousness of the King, and the power he allowed his

mistresses to obtain over him, had continually thwarted Sully and undone much of the good they had together proposed and executed. The minister's remonstrances were frequent, bold, and at times even violent; indeed, his whole life had been distinguished by an honest bluntness; but the propensities of the amorous monarch were incurable, and his faithful servant had the mortification of seeing him disgrace the last years of his life by an infatuation for the Princess of Condé. Henry had already determined on a war with his old enemies the Spaniards, when the flight of this lady with her husband, who took refuge in the states of the house of Austria, induced him to hurry on his preparations to attack both the Emperor and the King of Spain. Sully, at this time, had amassed forty millions of livres in the treasury of the state, and he engaged moreover to increase this sum to sixty or to seventy millions without laying on any new taxes. He had also provided the most numerous and magnificent corps of artillery that had ever been seen in Europe. But in the midst of these grand preparations Henry's mind was agitated by his insane passion for the Princess of Condé, and oppressed by a presentiment of his fate. He was indeed told on every hand that plots were laid against his life; his romantic courage forsook him, he became absent and suspicious, and at last distrusted even his faithful minister.

Sully now no longer saw his master except at short intervals, and lived, retired from the court, at the Arsenal, his official residence as Grand Master of the Artillery.

The naturally confident and noble nature of Henry, and his old attachment for the sharer in all his fortunes, triumphed however over his weaknesses and illusions, and he determined to pay Sully a visit and to excuse himself for his late coldness. With these amiable intentions the King left his palace, and was on his way to the Arsenal in an open carriage, when he was stabbed to the heart by the fanatic Ravallac.

On the death of Henry IV. Sully would have continued his valuable services under the Queen-widow, Mary de' Medici, who was appointed Regent, but that Princess resigning herself and the government of the state to intriguing Italians, headed by the unpopular Concini, the honest and indignant minister quitted office and the court for ever, and retired to his estates.

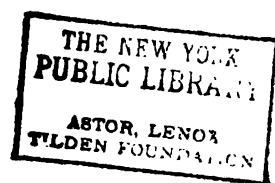
The life Sully led in his retreat was most rational and dignified. Unmoved by the ingratitude of the court, of which he was continually receiving fresh proofs, he continued to love the country he had so long governed; and though a zealous Protestant to the last, he would never join in the intrigues of the Hugonots, which he dreaded might renew

the horrors of civil war. To find occupation for his active mind he dictated his *Memoirs* to four secretaries, whom, for many years, he retained in his service, and who, in the '*Economies Royales*,' better known under the title of '*Mémoires de Sully*,' preserved not only the most interesting details of the life of their noble master and of Henry IV., but the fullest account of the history and policy, manners and customs, of the age in which Sully lived. Neither the occupations of war nor of politics, in which he had been absorbed for thirty-four years, had eradicated his original taste for polite literature; and in his retirement he composed many pieces not only in prose but in verse. One of his poetical compositions, which is a parallel between Henry IV. and Julius Cæsar, was translated into Latin and much admired throughout Europe.

After having lived thirty years in this retirement, the great Sully expired at his Château of Villebonne, in the eighty-second year of his age, on the 22d December, 1641—the same year in which Lord Strafford, the minister of Charles I., was beheaded in London, and in which the grave closed over the widow of Henry IV., Mary de' Medici, who died at Cologne in obscurity and great poverty.

It is to be regretted that no author has yet produced a life of Sully worthy of the subject. The '*Economies Royales*' is the great storehouse of information, but its prolixity and singularity of style render it little attractive to the general reader. The following works, however, may be consulted:—'*Les Vies des Hommes Illustres de la France*,' by M. D'Auvigny, and the memoir in the '*Biographie Universelle*.'







Engraved by J. B. H. White

N. POUSSIN.

*From the original Picture by himself  
in the Gallery of the Louvre.*

Under the Superintendence of the Society for the Diffusion of Useful Knowledge

London Published by Charles Knight, Fife Mall 1801









TRUTH and compliment are happily united in Poussin's observation to a noble amateur, "You wanted but the stimulus of necessity to have become a great painter." The artist had himself felt this stimulus, and he knew its value in producing resolution and habits of industry. His family was noble, but indigent: John, his father, a native of Soissons, and a soldier of fortune, served during the reigns of Charles IX., Henry III., and Henry IV., with more reputation than profit. At last, finding that in the trade of arms his valour was likely to be its own reward, he married the widow of a solicitor, resigned his military employments, and fixed his abode at Andelys in Normandy, where, in June 1594, his son Nicholas, the subject of the present memoir, was born.

The district in which Andelys is situated is remarkable for its picturesque beauty, and from the scenery which surrounded him the genius of Poussin drew its first inspiration. His sketches of landscape attracted the notice and commendation of Quintin Varin, an artist residing in the neighbourhood. Animated by praise, young Poussin earnestly solicited his father that he might become Varin's pupil: a request to which the prudent parent, after long hesitation, reluctantly acceded. He knew that in such a pursuit as that of the fine arts, much of the aspirant's life must be expended before a just estimate of his professional talents can be formed, and that even where talent exists, the success of the possessor is not always commensurate to its claims. The youth, however, was fortunate in meeting, in the first instance, with a preceptor whose instructions, founded on just principles, left him nothing to unlearn. He remained with Varin until his eighteenth year, when he went to Paris, and studied under Ferdi-

nand Elle, and L'Allemand, two artists then in fashion, from whom he learned nothing. In the mean time he had become acquainted with several persons who appreciated his dawning talents, and felt an interest in his fortunes. Among the rest, a young nobleman of Poitou manifested an almost fraternal attachment towards him, relieved his pecuniary wants, and among other services introduced him to Courtois, the King's mathematician, who possessed a fine collection of prints by Marc Antonio, and a great number of drawings and sketches by Raffaele, Giulio Romano, and other great masters of the Roman school. These treasures Poussin studied and copied with sedulous zeal and attention, and he was frequently heard to advert to this circumstance as one of the most fortunate of his life, inasmuch as the contemplation of these fine examples had fixed his taste, and determined the bent of his powers towards the higher branches of art, at a time when his mind was fluctuating between the attractions of different schools.

The young Poitevin, being summoned to return home, invited Poussin to become his companion, and to undertake a series of pictures, calculated, by its extent as well as its excellence, to do honour to his paternal mansion. But his mother regarded the fine arts and those who patronised them with equal and unqualified contempt: and suffering in her house the exercise of none but what she considered useful talents, she assigned to Poussin the office of house-steward, and his visions of fame were at once dispelled by the humble occupation of overlooking the servants, and keeping accounts. It may easily be supposed that the young artist did not deport himself very meekly under the new appointments which had thus unexpectedly been thrust upon him. Without asking the sympathy or assistance even of his friend, who, it would appear, had acquiesced too readily in his mother's arrangements, he quitted the house and made his way to Paris on foot; having no other means of support on the road than the extemporaneous productions of his pencil. In consequence of the hardships which he experienced during this journey, he was attacked by a fever on reaching Paris, which obliged him to return to Andelys. After the lapse of a year, having recruited his health, he made arrangements to execute a long-cherished purpose of a journey to Rome. But with an improvidence not uncommon in artists, and sometimes falsely said to be characteristic of genius, he calculated his resources so inaccurately that in two successive attempts he was obliged to return, leaving his purpose unaccomplished. In the first instance he reached Florence, but in the second, he got no

farther than Lyons. The disappointment, however, was attended with good results, for on his return to Paris, a circumstance occurred which at once raised him into high reputation.

The Jesuits had ordered a set of pictures for a high festival, which were to display the miracles worked by their patron saints, Ignatius Loyola, and Francis Xavier. Of these, six were executed by Poussin, in a very short space of time; the pictures were little more than sketches, but they exhibited such powers of composition and expression, that he was at once acknowledged to have distanced all competitors. His acquaintance was now sought by amateurs and literati; but the chief advantage which accrued to him was the friendship of the Chevalier Marini, a distinguished Italian, who had settled in Paris, and engaged with interest in the cultivation of elegant literature and the arts. His mind was stored with classical erudition, and he delighted to exercise his poetic talent on the then fashionable fables of heathen mythology. Such pursuits were congenial to Poussin's turn of mind; and by the advice, and with the assistance of Marini, he entered deeply into the study of the Latin and Italian authors. Hence he drew the elements of that knowledge of the customs, manners, and habits of antiquity, by which his works are so eminently distinguished. Marini, soon after, went to Rome, and was anxious that Poussin should accompany him; but this the artist found impossible, from the number of unfinished commissions on his hands. In the ensuing year, however, 1624, his long-cherished wish was accomplished, and he trod the streets of the Eternal City.

Among the innumerable pilgrims who have thronged to that mighty shrine, no one ever, perhaps, approached it with deeper reverence than Poussin, or studied in the school of antiquity with more zeal and success. He commenced his labours with that enthusiasm which the objects around him could not fail to inspire, and comprehended in the round of his studies the different sciences which bore collaterally upon his art. Some of his finest works are among those which he produced at this period; but his talents were not at first appreciated in Rome, and the spectre of penury still haunted his study. His friend Marini had gone to Naples, where he died, and the Cardinal Barberini, to whose favour he had been especially recommended, was absent on a legation in Spain. Among other works which his necessities compelled him to dispose of at this time for a trifling sum, was "The Ark of God in the hands of the Philistines," which was purchased from him for fifty crowns, and sold shortly afterwards to the Duc de Richelieu for one thousand. Accident and ill health combined with poverty to overcloud

the early part of his abode in Rome. The French were then very unpopular, on account of some differences existing between the Court of France and the Holy See. Poussin was assaulted in the streets by some of the Pope's soldiery, severely wounded by a sabre-cut in the hand, and only escaped more serious injury by the spirit and resolution with which he defended himself. After recovering from this injury, he was again rendered unable to pursue his art by a lingering illness; in the course of which a fellow-countryman, named Jean Dughet, took him to his own home, and treated him with care, which soon restored him to health. Six months afterwards he married the daughter of his host, and subsequently adopted his wife's brother, Gaspar, who assumed his name, and has shared its honours by his splendid landscapes. With part of his wife's portion Poussin purchased a house on the Pincian Hill, which is still pointed out as an object of interest to travellers and students.

From this period the fortune of Poussin began to improve. Relieved from his embarrassments, and tranquillized by domestic comfort, he proceeded in the calm exercise of his powers; and the fine works on which his reputation is founded were painted in rapid succession. Cardinal Barberini, who had returned to Rome, engaged him to execute one of the large paintings ordered to be copied in mosaic for St. Peter's Church. The subject was the Martyrdom of St. Erasmus; but the picture, which is now in the Vatican, furnishes no reason for regret that Poussin did not more frequently employ himself on works of large dimensions. A circumstance occurred at this time which it is gratifying to relate, as it exhibits two distinguished men engaged in the honourable task of promoting the success and vindicating the reputation of each other. When Poussin arrived at Rome, he found the lovers of art divided into two parties, composed respectively of the admirers of Guido and Domenichino. Two pictures had been painted by those artists, which, as if to decide their rival claims, were hung opposite to each other in the church of San Gregorio. The subjects were similar; the one the Flagellation, the other the Martyrdom of the Saint from whom the church is named. The performance of Guido was the one most generally preferred: but Poussin formed a different judgment, and sat down to copy the picture of the less popular artist. Domenichino, on being informed of this, although he was then suffering from illness, ordered himself to be carried to the church, where he entered into conversation with Poussin, to whom he was personally unknown, and who indeed imagined him to be dead. A friendly intimacy was the consequence of this interview, which was

exceedingly advantageous to Poussin, as Domenichino took pleasure in communicating all that knowledge of art, which long experience had enabled him to acquire. Shortly after this Domenichino quitted Rome for Naples, and the storm of envy and detraction seemed to gather force in his absence. So much was his reputation injured, that the monks of the convent of San Girolamo della Carità, who had in their possession his superb picture of the Communion of St. Jerome, ordered it to be removed from the walls and consigned to a cellar as a thing utterly contemptible. This anecdote, were it not attested by unquestionable evidence, would be difficult to believe; for the merits of the picture require no deep knowledge of art to be duly appreciated: it is not less admirable in colour and effect than in sentiment and character. The intelligent monks, however, wishing for a picture to supply its place, engaged Poussin to paint one, acquainting him at the same time that they could save him the expense of canvass, by sending him a worthless daub, over which he might paint. The astonishment of Poussin on receiving the picture may be easily conceived. He immediately directed it to be carried to the church from whence it had been taken, and announced his intention to deliver a public disquisition on its merits. This he accordingly did to a large auditory, and with such force of reasoning and illustration, that malice was silenced and prejudice convinced; and the name of Domenichino assumed from that time its just rank in public estimation.

The pictures of Poussin, as he advanced in his career, were eagerly purchased by connoisseurs from all countries, and his fame was at length established throughout Europe. In 1638 a project was suggested to Louis XIII., by Cardinal Richelieu, for finishing the Louvre, and adorning the royal palaces, according to the magnificent plans of Francis I. The high reputation of Poussin marked him out as the person best qualified for the partial execution and entire superintendence of these splendid works; and accordingly a letter was transmitted to him by order of the French monarch, appointing him his principal painter, and requesting his immediate attendance at Paris. But so absorbed was the artist in his studies, and so unambitious was his temper, that he allowed two years to elapse before he attended to this flattering requisition; nor is it probable that he would have quitted Rome at all, had not a gentleman been despatched from the court of France to bring him. On his arrival, he was presented to the King, who received him with courtesy, and assigned him a liberal income. Placed in the full enjoyment of fame and wealth,

Poussin's situation might well appear enviable to his less favoured brethren in art. But his station, brilliant as it was, proved ill-suited to his disposition: and his letters to his friends in Rome were soon filled with the language of disappointment and complaint. He felt that he was no longer exercising his genius as an artist, but labouring as an artisan. Commissions were poured in upon him from the court with merciless rapidity, without the slightest calculation of the time requisite to the production of works of art. On one occasion he was required to execute a picture containing sixteen figures, larger than life, within six weeks. Nor was this the worst: the triflers of the court obtruded on him, with irritating politeness, the most insignificant employments; designs for chimney-pieces, ornamental cabinets, bindings for books, repairing pictures, &c. To complete the catalogue of annoyances, his coadjutors in the public works, Le Mercier the architect, and the painters Vouet and Fouquieres, thwarted and opposed him in every particular; until at length, worn out and disgusted, he applied for permission to return to Rome. This he obtained with some difficulty, and not without a stipulation that he should revisit Paris within twelve months. It is not improbable that the condition would never have been fulfilled; but the King's death in the following year released him from the obligation. The last works executed by Poussin in Paris were two allegorical subjects: the one, Time bringing Truth to light, and delivering her from the fiends, Malice and Envy; in which an allusion was most probably meant to the controversies in which he had been engaged: the other, in which his intention is less equivocal, is an imitation of bas-relief, in the ceiling of the Louvre, where his opponents, Fouquieres, Le Mercier, and Vouet, are consigned to the derision of posterity under the figures of Folly, Ignorance, and Envy.

Perhaps the happiest, and not an inconsiderable, portion of Poussin's life, was that which intervened between his return to Rome and his death. Experience of the cabals and disquietudes of Paris had no doubt taught him to value the classical serenity of his adopted home. Although in possession of great and undisputed fame, and sufficiently affluent, he continued to labour in his art with unre-laxing diligence, if that may be called labour which constituted his highest gratification. His talents and moral worth drew round him a large circle of the learned and the polite, who anxiously sought his society during his leisure hours; and in his evening walks on the Pincian Hill, he might have been said to resemble one of the philosophers of antiquity, surrounded by his friends and disciples. Thus he

descended, with tranquil dignity, into the vale of life. In 1665 he suffered from a stroke of the palsy, and, shortly after, the death of his wife plunged him into the deepest affliction. He perceived his own end to be approaching, and awaited it with calm resignation. He died in his 72d year, A.D. 1665, and was buried with public honours in the church of San Lorenzo in Lucina.

The pictures of Poussin are so numerous, and so generally dispersed, that every one, whose attention has been directed to the arts, must have a pretty accurate impression of his style. It is a style of perfect originality, reminding us somewhat of ancient art, but without a tincture of imitation of any modern master. For a short time Poussin sought a model in the school of Titian, but turned from that task to copy the pictures discovered among the ruins of ancient Rome. Apparently he wished to give his works something of the subdued tone which Time has communicated to those relics; and hence, in some of his pictures, there is a singular discrepancy between the subject and the effect. He delighted to paint antique revels, bacchanalians, dancing nymphs, &c.; but his tints never accord with gay subjects, nor exhibit the vivacity and freshness proper to such scenes. The solemn and sombre hue of his colouring is far better adapted to grand or pathetic subjects. Considering the implicit and almost idolatrous admiration with which Poussin regarded the antique statues, it is astonishing that he should not have infused into his own forms more of the spirit in which these are conceived; for, in this point, imitation could not have been carried too far. But the reverse is the case: his figures are direct transcripts of individual models, usually correct in proportion, but seldom rendered ideal, or generalized into beauty. A still greater defect is chargeable on his composition, which is almost invariably scattered and confused, without a centre of interest or point of unity. His principal figures are mixed up with the subordinate ones, and those again with the accessories in the back-ground. What, then, are the qualities by which Poussin has acquired his high reputation? The principal one we conceive to consist in that very simplicity and severity, by which perhaps the eye is at first offended. He appears to feel himself above the necessity of superficial ornament. He is always thoroughly in earnest; his figures perform their business with an emphasis which rivets our attention, we become identified with the subject, and lose all thought of the painter in his performance. This is a result never produced by an inferior artist. On the whole, although we cannot assign Poussin a place by the side of Raffaele, Rubens, Titian, and some others, who may be

considered the giants of art, and compose the foremost rank, he certainly stands among those who are most eminent in the second. His compositions, which are very numerous, are varied with great skill, and surprise us, not unfrequently, with novel and striking combinations; and several among them—we may adduce particularly the Ark of God among the Philistines, the Deluge, and the Slaughter of the Innocents—could only have originated in a mind of a very exalted order.

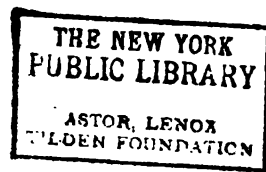
Several of Poussin's finest works are in this country. In the Dulwich Gallery there is, we believe, the largest number to be found in any one collection. Among those, the subject of the Angels appearing to Abraham is treated with considerable grace and beauty. The picture of Moses striking the rock, in the possession of the Marquis of Stafford, is one of Poussin's most profound and elaborate performances; and, in the National Gallery, the two Bacchanalian subjects will furnish a full idea both of his powers and deficiencies in treating that favourite class of compositions.

The reader will find a more detailed account of the life and works of Poussin in Lanzi's '*Storia Pittorica dell' Italia*,' and Bellori's '*Vite di Pittori moderni*.' There is an English life of him written by Maria Graham. Much critical information concerning his style and performances will be found in the writings of Mengs, Reynolds, and Fuseli.



[Holy Family; from a picture by Poussin.]







Environ Biol Fish (2015) 98:137–149

W. HARVEY, M.D.

From the original taken by L. Davis  
in the possession of the College Court.

Under the "Corporate Finance" of the Society for the Advancement of Accounting, which

*Journal published by the American Psychological Association*







**WILLIAM HARVEY** was born on the 1st of April, 1578, at Folkstone, on the southern coast of Kent. He was the eldest of nine children; of the rest little more is known than that several of the brothers were among the most eminent merchants in the city of London during the reigns of the two first Stuarts. His father, Thomas Harvey, followed no profession. He married Joanna Falke at the age of twenty, and lived upon his own estate at Folkstone. This property devolved by inheritance upon his eldest son; and the greatest part of it was eventually bequeathed by him to the college at which he was educated.

At ten years of age he commenced his studies at the grammar school in Canterbury; and upon the 31st of May, 1593, soon after the completion of his fifteenth year, was admitted as a pensioner at Caius College, Cambridge.

At that time a familiar acquaintance with logic and the learned languages was indispensable as a first step in the prosecution of all the branches of science, especially of medicine; and the skill with which Harvey avails himself of the scholastic form of reasoning in his great work on the Circulation, with the elegant Latin style of all his writings, particularly of his latest work on the Generation of Animals, afford a sufficient proof of his diligence in the prosecution of these preliminary studies during the next four years, which he spent at Cambridge. The two next were occupied in visiting the principal cities and seminaries of the Continent. He then prepared to address himself to those investigations to which the rest of his life was devoted; and the scene of his introduction to them could not have been better chosen

than at the University of Padua, where he became a student in his twenty-second year.

The ancient physicians gathered what they knew of anatomy from inaccurate dissections of the lower animals ; and the slender knowledge thus acquired, however inadequate to unfold the complicated functions of the human frame, was abundantly sufficient as a basis for conjecture, of which they took full advantage. With them every thing became easy to explain, precisely because nothing was understood ; and the nature and treatment of disease, the great object of medicine and of its subsidiary sciences, was hardily abandoned to the conduct of the imagination, and sought for literally among the stars. Nevertheless, so firmly was their authority established, that even down to the close of the sixteenth century the naturalists of Europe still continued to derive all their physiology, and the greater part of their anatomy and medicine, from the works of Aristotle and Galen, read not in the original Greek, but re-translated into Latin from the interpolated versions of the Arabian physicians. The opinions entertained by these dictators in the republic of letters, and consequently by their submissive followers, with regard to the structure and functions of the organs concerned in the circulation, were particularly fanciful and confused, so much so that it would be no easy task to give an intelligible account of them that would not be tedious from its length. It will be enough to say, that a scarcely more oppressive mass of mischievous error was cleared away from the science of astronomy by the discovery of Newton, than that from which physiology was disencumbered by the discovery of Harvey.

But though the work was completed by an Englishman, it is to Italy that, in anatomy, as in most of the sciences, we owe the first attempts to cast off the thralldom of the ancients. Mundinus had published a work in the year 1315, which contained a few original observations of his own ; and his essay was so well received that it remained the text-book of the Italian schools of anatomy for upwards of two centuries. It was enriched from time to time by various annotators, among the chief of whom were Achillini, and Berengarius, the first person who published anatomical plates. But the great reformer of anatomy was Vesalius, who, born at Brussels in 1514, had attained such early celebrity during his studies at Paris and Louvain, that he was invited by the republic of Venice in his twenty-second year to the chair of anatomy at Padua, which he filled for seven years with the highest reputation. He also taught at Bologna, and subsequently, by the invitation of Cosmo de' Medici, at Pisa. The first edition of his

work '*De Corporis Humani fabricâ*,' was printed at Basle in the year 1543; it is perhaps one of the most successful efforts of human industry and research, and from the date of its publication begins an entirely new era in the science of which it treats. The despotic sway hitherto maintained in the schools of medicine by the writings of Aristotle and Galen was now shaken to its foundation, and a new race of anatomists eagerly pressed forward in the path of discovery. Among these no one was more conspicuous than Fallopius, the disciple, successor, and in fame the rival, of Vesalius, at Padua. After him the anatomical professorship was filled by Fabricius ab Aquapendente, the last of the distinguished anatomists who flourished at Padua in the sixteenth century.

Harvey became his pupil in 1599, and from this time he appears to have applied himself seriously to the study of anatomy. The first germ of the discovery which has shed immortal honour on his name and country was conceived in the lecture-room of Fabricius.

He remained at Padua for two years; and having received the degree of Doctor in Arts and Medicine with unusual marks of distinction, returned to England early in the year 1602. Two years afterwards he commenced practice in London, and married the daughter of Dr. Launcelot Browne, by whom he had no children. He became a fellow of the College of Physicians when about thirty years of age, having in the mean time renewed his degree of Doctor in Medicine at Cambridge; and was soon after elected Physician to St. Bartholomew's Hospital, which office he retained till a late period of his life.

On the 4th of August, 1615, he was appointed Reader of Anatomy and Surgery to the College of Physicians. From some scattered hints in his writings it appears that his doctrine of the circulation was first advanced in his lectures at the college about four years afterwards; and a note-book in his own handwriting is still preserved at the British Museum, in which the principal arguments by which it is substantiated are briefly set down, as if for reference in the lecture-room. Yet with the characteristic caution and modesty of true genius, he continued for nine years longer to reason and experimentalize upon what is now considered one of the simplest, as it is undoubtedly the most important, known law of animal nature; and it was not till the year 1628, the fifty-first of his life, that he consented to publish his discovery to the world.

In that year the '*Exercitatio Anatomica de Motu Cordis et Sanguinis*' was published at Frankfort. This masterly treatise begins with a short outline and refutation of the opinions of former anatomists

on the movement of the animal fluids and the function of the heart; the author discriminating with care, and anxiously acknowledging the glimpses of the truth to be met with in their writings; as if he had not only kept in mind the justice due to previous discoveries, and the prudence of softening the novelty and veiling the extent of his own, but had foreseen the preposterous imputation of plagiarism, which, with other inconsistent charges, was afterwards brought forward against him. This short sketch is followed by a plain exposition of the anatomy of the circulation, and a detail of the results of numerous experiments; and the new theory is finally maintained in a strain of close and powerful reasoning, and followed into some of its most important consequences. The whole argument is conducted in simple and unpretending language, with great perspicuity, and scrupulous attention to logical form.

The doctrine announced by Harvey may be briefly stated thus:—

When the blood supplied for the various processes which are carried on in the living body has undergone a certain degree of change, it requires to be purified by the act of respiration. For this purpose it is urged onwards by fresh blood from behind into the veins; and returning in them from all parts of the body, enters a cavity of the heart called the *right auricle*. At the same time the purified blood returning from the lungs by the pulmonary veins, passes into the *left auricle*. When these two cavities, which are distinct from each other, are sufficiently dilated, they contract, and force the blood which they contain into two other much more muscular cavities called respectively the right and left *ventricle*, all retrogression into the auricles being prevented by valves, which admit of a passage in one direction only. The ventricles then contract in their turn with great force, and at the same instant; and propel their blood, the right, by the pulmonary artery into the lungs; the left, which is much the stronger of the two, into all parts of the body, by the great artery called the *aorta*, and its branches; all return being prevented as before by valves situated at the orifices of those vessels, which are closed most accurately when the ventricles relax, by the backward pressure of the blood arising from the elasticity of the arteries. Thus the purified blood passes from the lungs by the pulmonary veins through the left auricle into the ventricle of the same side, by which it is distributed into all parts of the body, driving the vitiated blood before it; and the vitiated blood is pushed into and along the veins to the right auricle, and thence is sent into the right ventricle, which propels it by the pulmonary artery through the lungs. In this manner a double circulation is kept up by the sole



agency of the heart, through the lungs, and through the body; the contractions of the auricles and ventricles taking place alternately. To prevent any backward motion of the blood in the superficial veins, which might happen from their liability to external pressure, they are also provided with simple and very complete valves which admit of a passage only towards the heart. They were first remarked by Fabricius ab Aquapendente, and exhibited in his lectures to Harvey among the rest of his pupils; but their function remained a mystery till it was explained by the discovery of the circulation. It is related by Boyle, upon Harvey's own authority, that the first idea of this comprehensive principle suggested itself to him when considering the structure of these valves.

The pulmonary circulation had been surmised by Galen, and maintained by his successors; but no proof even of this insulated portion of the truth, more than amounted to strong probability, had been given till the time of Harvey; and no plausible claim to the discovery, still less to the demonstration, of the general circulation has ever been set up in opposition to his. Indeed its truth was quite inconsistent with the ideas everywhere entertained in the schools on the functions of the heart and other viscera, and was destructive of many favourite theories. The new doctrine, therefore, as may well be supposed, was received by most of the anatomists of the period with distrust, and by all with surprise. Some of them undertook to refute it; but their objections turned principally on the silence of Galen, or consisted of the most frivolous cavils: the controversy, too, assumed the form of personal abuse even more speedily than is usually the case when authority is at issue with reason. To such opposition Harvey for some time did not think it necessary to reply; but some of his friends in England, and of the adherents to his doctrine on the Continent, warmly took up his defence. At length he was induced to take a personal share in the dispute in answer to Riolanus, a Parisian anatomist of some celebrity, whose objections were distinguished by some show of philosophy, and unusual abstinence from abuse. The answer was conciliatory and complete, but ineffectual to produce conviction; and in reply to Harvey's appeal to direct experiment, his opponent urged nothing but conjecture and assertion. Harvey once more rejoined at considerable length; taking occasion to give a spirited rebuke to the unworthy reception he had met with, in which it seems that Riolanus had now permitted himself to join; adducing several new and conclusive experiments in support of his theory; and entering at large upon its value in simplifying physiology and the study of diseases, with

other interesting collateral topics. Riolanus, however, still remained unconvinced ; and his second rejoinder was treated by Harvey with contemptuous silence. He had already exhausted the subject in the two excellent controversial pieces just mentioned, the last of which is said to have been written at Oxford about 1545 ; and he never resumed the discussion in print. Time had now come to the assistance of argument, and his discovery began to be generally admitted. To this indeed his opponents contributed by a still more singular discovery of their own, namely, that the facts had been observed, and the important inference drawn long before. This was the mere allegation of envy, chafed at the achievements of another, which, from their apparent facility, might have been its own. It is indeed strange that the simple mechanism thus explained should have been unobserved or misunderstood so long ; and nothing can account for it but the imperceptible lightness as well as the strength of the chains which authority imposes on the mind.

In the year 1623 Harvey became Physician Extraordinary to James I., and seven years later was appointed Physician to Charles. He followed the fortunes of that monarch, who treated him with great distinction, during the first years of the civil war, and he was present at the battle of Edgehill in 1642. Having been incorporated Doctor of Physic by the University of Oxford, he was promoted by Charles to the Wardenship of Merton College in 1645 ; but he did not retain this office very long, his predecessor Dr. Brent being reinstated by the parliament after the surrender of Oxford in the following year.

Harvey then returned to London and resided with his brother Eliab at Cockaine-house in the Poultry. About the time of Charles's execution he gave up his practice, which had never been considerable, probably in consequence of his devotion to the scientific, rather than the practical parts of his profession. He himself, however, attributed his want of success to the enmity excited by his discovery. After a second visit to the Continent, he secluded himself in the country, sometimes at his own house in Lambeth, and sometimes with his brother Eliab at Combe in Surrey. Here he was visited by his friend Dr. Ent in 1651, by whom he was persuaded to allow the publication of his work on the Generation of Animals. It was the fruit of many years of experiment and meditation ; and though the vehicle of no remarkable discovery, is replete with interest and research, and contains passages of brilliant and even poetical eloquence. The object of his work is to trace the germ through all its changes to the period of maturity ; and the illustrations are principally drawn from the pheno-

mena exhibited by eggs in the process of incubation, which he watched with great care, and has described with minuteness and fidelity. The microscope had not at that time the perfection it has since attained ; and consequently Harvey's account of the first appearance of the chick is somewhat inaccurate, and has been superseded by the observations of Malpighi, Hunter, and others. The experiments upon which he chiefly relied in this department of natural history had been repeated in the presence of Charles I., who appears to have taken great interest in the studies of his physician.

In the year 1653, the seventy-fifth of his life, Harvey presented the College of Physicians with the title-deeds of a building erected in their garden, and elegantly fitted up at his expense, with a library and museum, and commodious apartments for their social meetings. Upon this occasion he resigned the Professorship of Anatomy, which he had held for nearly forty years, and was succeeded by Dr. Glisson.

In 1654 he was elected to the Presidency of the College, which he declined on the plea of age ; and the former President, Sir Francis Prujean, was re-elected at his request. Two years afterwards he made a donation to the college of a part of his patrimonial estate to the yearly value of £56, as a provision for the maintenance of the library and an annual festival and oration in commemoration of benefactors.

At length his constitution, which had long been harassed by the gout, yielded to the increasing infirmities of age, and he died in his eightieth year, on the 3d of June, 1657. He was buried at Hempstead in Essex, in a vault belonging to his brother Eliab, who was his principal heir, and his remains were followed to the grave by a numerous procession of the body of which he had been so illustrious and munificent a member.

The best edition of his works is that edited by the College of Physicians in 1766, to which is prefixed a valuable notice of his life, and an account of the controversy to which his discovery of the circulation gave rise. All that remain of his writings in addition to those which have been already mentioned, are an account of the dissection of Thomas Parr, who died at the age of 153, and a few letters addressed to various Continental anatomists. His lodgings at Whitehall had been plundered in the early part of the civil war, of many papers containing manuscript notes of experiments and observations, chiefly relating to comparative anatomy. This was a loss which he always continued to lament. The missing papers have never been recovered.

In person he was below the middle size, but well-proportioned. He had a dark complexion, black hair, and small lively eyes. In his youth

his temper is said to have been very hasty. If so he was cured of this defect as he grew older ; for nothing can be more courteous and temperate than his controversial writings, and the genuine kindness and modesty which were conspicuous in all his dealings with others, with his instructive conversation, gained him many attached and excellent friends. He was fond of meditation and retirement ; and there is much in his works to characterize him as a man of warm and unaffected piety.

There are several histories of his life ; a very elegant one has lately been published in a volume of the Family Library, entitled ' Lives of British Physicians.'

---

THE NEW YORK  
PUBLIC LIBRARY  
ASTOR, LENOX  
TILDEN FOUNDATION



Engraved by J. W. B. 1793.

SIR J. BANKS.

*From a Coloured Copy of the  
original of the Royal Society*

Entered in the Library of the Society for the History of Natural Science

Printed and Sold by Charles Dilly and Son, in Pall Mall.









POSTERITY is likely to do scanty justice to the merits of Banks, when the grateful recollections of his contemporaries shall have passed away. His name is connected with no great discovery, no striking improvement; and he has left no literary works from which the extent of his industry, or the amount of his knowledge can be estimated. Yet he did much for the cause of science; much by his personal exertions, more by a judicious and liberal use of the advantages of fortune. For more than half a century a zealous and successful student of natural history in general, and particularly of botany, the history of his scientific life is to be found in the records of science during that long and active period. We shall not attempt to compress so intricate and extensive a subject within the brief limits of three or four pages; but confine ourselves to a short sketch of his character and personal adventures. Some fitting person will, it is to be hoped, ere too late, undertake to write the life of our distinguished countryman upon a scale calculated to do justice to his merits: at present this task is not only unperformed, but unattempted.

Joseph Banks was born in London, February 13, 1743. Of his childhood we find few memorials. He passed through the ordinary routine of education; having been first committed to the care of a private tutor at home, then placed at Harrow, afterwards at Eton, and finally sent to complete his studies at Christchurch, Oxford. Born to the inheritance of an ample fortune, and left an orphan at the age of eighteen, it is no small praise that he was not allured by the combined temptations of youth, wealth, and freedom, to seek his happiness in vicious, or even idle pleasures. Science, in one of its most attractive branches, the study of animated nature, was his amusement as a school-boy, and the favourite pursuit of his mature years: and he was rewarded for his devotion, not merely in the rank and estimation which

he obtained by its means, but also in his immunity from the dangers which society throws in the way of those who have the means of gratifying their own passions, and the vanities and interests of their friends.

He quitted the university in the year 1763. In 1766 he gave a proof of his zeal for knowledge by engaging in a voyage to Newfoundland. He was induced to choose that most unattractive region, by having the opportunity of accompanying a friend, Lieutenant Phipps, afterwards Lord Mulgrave, well known as a navigator of the Polar Seas, who was sent out in a ship of war to protect the fisheries. Soon after his return a much more interesting and important field of inquiry was opened to him by the progress of discovery in the southern hemisphere. In 1764 Commodore Byron, in 1766 Captains Wallis and Carteret were sent into the South Sea, to investigate the geography of that immense and then unfrequented region. These expeditions were succeeded in 1768 by another under the command of Captain Cook, who first obtained celebrity as a navigator upon this occasion. Lord Sandwich, then First Lord of the Admiralty, possessed an estate in Lincolnshire on the borders of Whittlesea Mere. Mr. Banks's chief property lay in the same neighbourhood: and it so chanced that similarity of tastes, and especially a common predilection for all aquatic amusements, had produced a great intimacy between the statesman and his young country neighbour. To this fortunate circumstance it may probably be ascribed, that on Mr. Banks expressing a wish to accompany the projected expedition, his desire was immediately granted. His preparations were made on the most liberal scale. He laid in an ample store of such articles as would be useful or acceptable to the savage tribes whom he was about to visit: and besides the usual philosophical apparatus of a voyage of discovery, he engaged two draughtsmen to make accurate representations of such objects as could not be preserved, or conveyed to England; and he secured the services of Dr. Solander, a Swedish naturalist, a pupil of Linnæus, who had previously been placed on the establishment of the British Museum. The history of this voyage belongs to the life of Cook. The expedition bent its course for the Southern Ocean, through the Straits of Le Maire, at the southern end of America. Mr. Banks and Dr. Solander landed on the desolate island of Terra del Fuego, where the severity of the cold had very nearly proved fatal to several of their party. Dr. Solander in particular was so entirely overcome by the drowsiness consequent on extreme cold and exhaustion, that it was with great difficulty, and by the unwearied exertion and resolution of his

more robust companion, that he was prevented from falling into that sleep which is the forerunner of death. Their farther course lay through the islands of the Pacific Ocean to Otaheite, which had been selected as a fitting place for the main object of the voyage, the observing of the passage of Venus over the sun's disk. At that island their stay was consequently prolonged for several months, during which the Europeans and the natives mingled together, generally on the most friendly terms. In this intercourse Mr. Banks took a very leading part. His liberality, and the high station which he evidently held among the strangers, conciliated the attachment and respect of the unpolished islanders: and the mingled suavity and firmness of his temper and demeanour rendered him singularly fitted both to protect the weaker party from the occasional wantonness or presumption of their visitors, and to check their knavery, and obtain satisfaction for the thefts which they not unfrequently committed. Once the astronomical purposes of the navigators were nearly frustrated by the loss of the large brass quadrant; and the recovery of this important instrument was chiefly due to the exertions and influence of Mr. Banks. Both hemispheres owe to him a tribute of gratitude; for while he gave the savages the improved tools, the esculent vegetables, and the domesticated animals of Europe, his exertions led to the introduction of the bread-fruit, and of the productive sugar-cane peculiar to Otaheite, into our West-India colonies.

After the lapse of three years the voyagers returned home, and were received with lively interest by all classes of society. Part of their collections were lost through an accident which happened to the vessel: but the greater portion was preserved, and their novelty and beauty excited the admiration of naturalists. George III., who delighted in everything connected with horticulture and farming, manifested a warm interest in inquiring into the results of the expedition, and conceived a liking for the young traveller, which continued unimpaired even to the close of his public life.

It was Mr. Banks's intention to accompany Captain Cook in his second voyage, in 1772: but the Navy Board showed no willingness to provide that accommodation which the extent of his preparations and the number of his scientific followers required, and he gave up the project, which indeed he could not satisfactorily execute. In the summer of that year he went to Iceland. Passing along the western coast of Scotland, he was led to visit Staffa, in consequence of local information; and to his description that singular island was first indebted for its general celebrity. He spent a month in Iceland. An account of this visit

has been published by M. Von Troil, a Swedish clergyman, who formed one of the party. On this, as on other occasions, Mr. Banks, unwearied in quest of knowledge, seemed careless of the fame to which most would have aspired as the reward of their labours. Of none of his travels has he himself given any account in a separate publication; indeed, a few papers in the Horticultural Transactions, and a very curious account of the causes of mildew in corn, not printed for sale, constitute the mass of his published works. But his visit was productive of much good to the Icelanders, though it remained uncommemorated in expensive quartos. He watched over their welfare, when their communication with Denmark was interrupted by war between that country and England; and twice sent cargoes of corn, at his own expense, to relieve their sufferings in seasons of scarcity. His benevolence was warmly acknowledged by the Danish Court.

Returning to England, Mr. Banks, at the early age of thirty, entered on that tranquil and useful course of life, from which during a long series of years he never deviated. His thirst for travel was checked or satiated; he undertook no more distant expeditions, but he ceased not to cultivate the sciences, for which he had undergone so many hardships. It was long hoped that he would publish some account of the rich harvest of vegetable productions which he had collected in the unknown regions of the Pacific; and for this purpose it was known that he had caused a very large number of plates to be engraved at a great expense: but, most probably owing to the death of Solander, these have never been given to the world. But if he hesitated to communicate himself to the public the results of his labours, in amends his museum and his library were placed most freely at the command of those who sought, and were able to profit by his assistance; and to these sources many splendid works, especially on botany, have mainly owed their merits, and perhaps their existence.

From the period of his return from Iceland Mr. Banks took an active part in the affairs of the Royal Society. His house was constantly open to men of science, whether British or foreign, and by the urbanity of his manners, and his liberal use of the advantages of fortune, he acquired that popularity which six years afterwards led to his election as President of that distinguished body. Two or three years afterwards a dangerous schism had nearly arisen in the Society, chiefly in consequence of the unreasonable anger of a party of mathematicians, headed by Dr. Horsley, afterwards Bishop of St. David's, who looked with contempt on sciences unsusceptible of mathematical proof, and loudly exclaimed against the chair of Newton being

filled, as they phrased it, by an amateur. It would be little profitable to rake up the embers of an ancient and unworthy feud. We shall only state therefore that Banks was elected in November, 1778; that for some time a violent opposition was raised against him; and that in January, 1784, the Society, by a formal resolution, declared itself satisfied with the choice which it had made. Horsley and a few others seceded, and for the rest of his life Banks continued the undisputed and popular president; a period of forty-one years from the epoch of his election.

We have said that at an early age Mr. Banks was fortunate in gaining the royal favour; marks of which were not wanting. In 1781 he was created a baronet; in 1795 he received the Order of the Bath, then very rarely bestowed upon civilians and commoners; and in 1797 he was made a Privy Councillor. The friendship between the King and the subject was cemented by similarity of pursuits; for the latter was a practical farmer as well as a philosopher, and under his care the value of his estates in Lincolnshire was considerably increased by improvements in the drainage of that singular country, in the direction of which Sir Joseph took an active part. He is said to have possessed such influence over the King's mind, that ministers sometimes availed themselves of it to recommend a measure unpalatable to their honest but somewhat obstinate master. We know not whether this be better founded than most other stories of back-stairs influence, easily thrown out and difficult to be refuted: it is at least certain that if Banks possessed such power, he deserves great credit for the singular moderation with which he used it. For himself he asked and received nothing: fortunately his station in society was one which renders disinterestedness an easy, if not a common virtue. His influence was directed to facilitate scientific undertakings, to soften to men of science the inconveniences of the long war of the Revolution, to procure the restoration of their papers and collections when taken by an enemy, or the alleviation of their sufferings in captivity. The French were especially indebted to him for such services. It is said by an eminent member of the Institute, in his Eloge upon Banks, that no less than ten times, collections addressed to the Jardin du Roi at Paris, and captured by the English, were restored by his intercession to their original destination. He thought that national hostility should find no entrance among followers of science; and the delicacy of his views on this subject is well displayed in a letter written on one of these occasions to Jussieu, where he says that he would on no account rob of a single botanical idea a man who had gone to seek

them at the peril of his life. In 1802 the National Institute of France, being then re-modelled, elected him at the head of their Foreign Associates, whose number was limited to eight. Cavendish, Maskelyne, and Herschel were also members of this distinguished list. In replying to the letter which announced this honour, Sir Joseph Banks expressed his gratitude in terms which gave offence to some members of that distinguished Society over which he himself presided. This exposed him to a virulent attack from an anonymous enemy, who published the letter in question in the English papers, accompanied by a most acrimonious address to the author of it; prompted, it is evident, not so much by a reasonable and patriotic jealousy, as by ancient pique, and a bitter detestation even of the science of revolutionary France.

Towards the close of life Sir Joseph Banks, who in youth had possessed a robust constitution, and a dignified and prepossessing figure, was grievously afflicted by gout. He endured the sufferings of disease with patience and cheerfulness, and died May 19, 1820, leaving no children. Lady Banks, whom he had married in 1779, survived him several years. His magnificent library he devised to the British Museum; and among other bequests for scientific purposes, he left an annuity to Mr. Frederic Bauer, an artist whom he had long employed in making botanical drawings from the garden at Kew, upon condition that he should continue the series.



*Banksia ericifolia.*

END OF VOL. I. ✓

JL

Eg











DEC 5 - 1929

